

Dr. Xin TAO

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EDUCATION

Ph.D. | 2013 - 2018 | The Chinese University of Hong Kong (CUHK), Hong Kong

- Major: Computer Science and Engineering
- Supervisor: Prof. Jiaya Jia

B.Eng | 2009 - 2013 | Shanghai Jiao Tong University (SJTU), Shanghai, China

- Major: Information Engineering (School of Electronic Information and Electrical Engineering (SEIEE))
- Program: Teaching Reform Class (TRC) – **Honors Class**
- Overall GPA: **89.22** / 100 | **90.72** / 100 (Major) | Rank: **1** / 91 (in TRC).

INTERESTS

Computer Vision

- Traditional methods in Image Restoration and Computational Photography problems.
- Deep Learning based methods for low-level tasks or interesting usage.

PUBLICATIONS

- Hongyun Gao, **Xin Tao**, Xiaoyong Shen, Jiaya Jia, “Dynamic Scene Deblurring with Parameter Selective Sharing and Nested Skip Connections”, CVPR 2019.
- Yi Wang, **Xin Tao**, Xiaoyong Shen, Jiaya Jia, “Semantic Regeneration Network”, CVPR 2019.
- Yi Wang, **Xin Tao**, Xiaojuan Qi, Xiaoyong Shen, Jiaya Jia, “Image Inpainting via Generative Multi-column Convolutional Neural Networks”, NeuIPS 2018.
- **Xin Tao**, Hongyun Gao, Xiaoyong Shen, Jue Wang, Jiaya Jia, “Scale-recurrent Network for Deep Image Deblurring”, CVPR 2018.
- Ying-Cong Chen, Huaijia Lin, Michelle Shu, Ruiyu Li, **Xin Tao**, Xiaoyong Shen, Yangang Ye, Jiaya Jia, “Facelet-bank for Fast Portrait Manipulation”, CVPR 2018 (**Oral**).
- **Xin Tao**, Chao Zhou, Xiaoyong Shen, Jue Wang, Jiaya Jia, “Zero-order Reverse Filtering”, ICCV 2017.
- **Xin Tao**, Hongyun Gao, Renjie Liao, Jue Wang, Jiaya Jia “Detail-revealing Deep Video Super-resolution”, ICCV 2017 (**Oral**).
- Xiaoyong Shen, Hongyun Gao, **Xin Tao**, Chao Zhou, Jiaya Jia “High-Quality Correspondence and Segmentation Estimation for Dual-Lens Smart-Phone Portraits”, ICCV 2017.
- Xiaoyong Shen, **Xin Tao**, Chao Zhou, Hongyun Gao, Jiaya Jia, “Regional Foremost Matching for Internet Scene Images”, ACM Transactions on Graphics (TOG) (SIGGRAPH Asia 2016)
- Xiaoyong Shen, **Xin Tao**, Hongyun Gao, Chao Zhou, Jiaya Jia, “Deep Automatic Portrait Matting”, ECCV 2016.
- Renjie Liao, **Xin Tao**, Ruiyu Li, Ziyang Ma, Jiaya Jia, “Video Super-Resolution via Deep Draft-Ensemble Learning”, ICCV 2015.
- Jianping Shi, **Xin Tao**, Li Xu, Jiaya Jia, “Break Ames room illusion: depth from general single images”, ACM Transactions on Graphics (TOG) (SIGGRAPH Asia 2015)

- Ziyang Ma, Renjie Liao, **Xin Tao**, Li Xu, Jiaya Jia, "Handling Motion Blur in Multi-Frame Super-Resolution", CVPR 2015.
- Li Xu, **Xin Tao**, and Jiaya Jia. "Inverse Kernels for Fast Spatial Deconvolution." ECCV 2014.
- Guangqiang He, Taizhi Liu, and **Xin Tao**, "The Multiparty Coherent Channel and its Implementation with Linear Optics", Optics Express (2013).

EXPERIENCES

Senior Researcher | Tencent | 2018 – present

- Lab: YouTu X-Lab

Ph.D. Student | CUHK | 2013 - 2018

- Supervisor: Prof. Jiaya Jia
 - Research Projects Involved: image deblurring | video super-resolution | image matting | image filtering | image inpainting | GAN.

Research Intern | Tencent | June 2017 – Sept 2017

- Lab: Youtu X-Lab
- Advisor: Yu-Wing Tai

Research Intern | Adobe Research | June 2016 – Sept 2016

- Lab: Creative Technologies Lab (CTL) in Seattle
- Advisor: Jue Wang

Research Assistant | SJTU | 2010 - 2012

- Lab: Laboratory of Quantum Nonlinear Photonics (QNP)
- Supervisor: Assoc. Prof. Guangqiang He

HONORS & AWARDS

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| · CUHK Certificate of Merit for Best Teaching Assistant Award | 2014 - 2015 |
| · CUHK Postgraduate Studentship | 2013 - Present |
| · Shanghai Outstanding Graduates | (Top 1%) 2013 |
| · National Scholarship | (Top 1 of 91) 2011 |
| · SJTU Academic Excellence Scholarship: First-class Prize | (Top 1%) 2011 |
| · Third Prize, China Undergraduate Mathematical Contest in Modeling (CUMCM 2011) | 2011 |
| · Honorable Mention Prize in Mathematical Contest In Modeling 2011 (MCM 2011) | 2011 |

SKILLS

Self Evaluation

- Curious and passionate to new knowledge and techniques | Active and analytical to dig into underlying principles and to solve tough problems | Quick to learn, self-motivated and hardworking | Open-minded to communicate and able to cooperate pleasantly
- Comprehensive background in various low-level vision techniques and methods | Good knowledge to representative methods in high-level vision.

Deep learning

- Proficient in Deep Learning framework TensorFlow, Pytorch, Caffe | Experienced in Torch
- Experienced in various network structures and tasks

Programming

- Proficient in MATLAB, Python | Experienced in C/C++
- Experienced in many computer vision and machine learning libraries and tools

REFERENCES

Ph.D. Supervisor | Prof. Jiaya Jia | [Website](#)

Adobe Mentor | Dr. Jue Wang | [Website](#)

Other information available upon request.