

# Mr. Xin TAO

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## OBJECTIVE

- To obtain a job position.

## EDUCATION

### **Ph.D. Candidate | 2013 - Present | 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**

- Previously I mainly focused on various Image Restoration and Computational Photography problems.
- Recently I pay more attention on Deep Learning based methods for low-level tasks or interesting usage.

## PUBLICATIONS

- **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, **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

### Ph.D. Student | CUHK | 2013 - Present

- Supervisor: Prof. Jiaya Jia
- Research Projects Involved:
  - Image Restoration: Image deblurring considering reflectance | Inverse kernels for non-blind deconvolution | Handling motion blur in multi-frame super-resolution | CNN-based method for video super-resolution.
  - Computational Photography: Image filtering | Single image depth estimation using small defocus clue | Automatic matting using deep learning.

### 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
- Research Projects Involved:
  - Implemented an automatic algorithm for non-periodic nonlinear photonic crystals design.
  - Designed a new implementation for multiparty quantum coherent channel.

## 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, Caffe | Experienced in Torch
- Experienced in implementing various network structures (low-level tasks, semantic segmentation and detection).

### Programming

- Proficient in MATLAB, Python | Experienced in C/C++, Lua
- 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.**