

XIAOWEI HU

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Address: Rm 1024, SHB, The Chinese University of Hong Kong, Shatin, Hong Kong.

EDUCATION

The Chinese University of Hong Kong (CUHK)

Ph.D. in Computer Science and Engineering

Advisor: Prof. Pheng-Ann Heng & Prof. Chi-Wing Fu

08/2016 - Present

Expected graduation date: 07/2020

South China University of Technology (SCUT)

B.Eng. in Computer Science and Technology

GPA: 3.95/4.0 (**rank 1st** in All-English-Teaching Union Class)

★ Selected by SCUT for a special class for the most promising students

09/2012 - 07/2016

RESEARCH INTERESTS

Computer vision, deep learning, low-level vision, and saliency computation.

HONORS AND AWARDS

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|---|-------------|
| Hong Kong Ph.D. Fellowship (the highest scholarship for students studying in Hong Kong) | 2016 - 2020 |
| Certificate of Merit for Excellent Teaching Assistant awarded by CSE Department, CUHK | 2018 |
| Top 10 Outstanding Students at SCUT (rank 1st , the highest award for students at SCUT) | 2016 |
| Google Excellence Scholarship (one of 58 winners in China) | 2015 |
| Tencent Outstanding Scholarship (the only undergraduate winner at SCUT) | 2015 |
| National Scholarship (the highest national wide scholarship for undergraduate students in China) | 2013 |
| Gold Award of Pan-Pearl-River-Delta University IT Project Competition in China | 2016 |
| First Prize and Best Practical Award of University IT Project Competition in Guangdong Province | 2016 |
| First Prize of Adolescents Science & Technology Innovation Contest in Hebei Province | 2011 |

PUBLICATION HIGHLIGHTS

- [1] *Direction-aware Spatial Context Features for Shadow Detection*
Xiaowei Hu, Lei Zhu, Chi-Wing Fu, Jing Qin, and Pheng-Ann Heng
IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), 2018 (**Oral**)
- [2] *Recurrently Aggregating Deep Features for Salient Object Detection*
Xiaowei Hu, Lei Zhu, Jing Qin, Chi-Wing Fu, and Pheng-Ann Heng
AAAI Conference on Artificial Intelligence (**AAAI**), 2018 (**Spotlight**)
- [3] *SINet: A Scale-insensitive Convolutional Neural Network for Fast Vehicle Detection*
Xiaowei Hu, Xuemiao Xu, Yongjie Xiao, Hao Chen, Shengfeng He, Jing Qin, and Pheng-Ann Heng
IEEE Transactions on Intelligent Transportation Systems (**T-ITS**), 2018
- [4] *Saliency-aware Texture Smoothing*
Lei Zhu*, **Xiaowei Hu***, Chi-Wing Fu, Jing Qin, and Pheng-Ann Heng (*joint 1st authors)
IEEE Transactions on Visualization and Computer Graphics (**TVCG**), accepted with minor revisions
- [5] *R³Net: Recurrent Residual Refinement Network for Saliency Detection*
Zijun Deng*, **Xiaowei Hu***, Lei Zhu, Xuemiao Xu, Jing Qin, Guoqiang Han, and Pheng-Ann Heng (*joint 1st authors)
International Joint Conference on Artificial Intelligence (**IJCAI**), 2018 (**Oral**)
- [6] *Bidirectional Feature Pyramid Network with Recurrent Attention Residual Modules for Shadow Detection*
Lei Zhu, Zijun Deng, **Xiaowei Hu**, Chi-Wing Fu, Xuemiao Xu, Jing Qin, and Pheng-Ann Heng
European Conference on Computer Vision (**ECCV**), 2018
- [7] *Deep Attentional Features for Prostate Segmentation in Ultrasound*
Yi Wang, Zijun Deng, **Xiaowei Hu**, Lei Zhu, Xin Yang, Xuemiao Xu, Pheng-Ann Heng, and Dong Ni
International Conference on Medical Image Computing and Computer Assisted Intervention (**MICCAI**), 2018

PAPERS UNDER REVIEW

- [1] *Anonymous*
Xiaowei Hu, Chi-Wing Fu, Lei Zhu, and Pheng-Ann Heng
Submitted to IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), 2019
- [2] *Anonymous*
Xiaowei Hu, Chi-Wing Fu, Lei Zhu, and Pheng-Ann Heng
Submitted to IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), 2019
- [3] *Direction-aware Spatial Context Features for Shadow Detection and Removal*
Xiaowei Hu, Chi-Wing Fu, Lei Zhu, Jing Qin, and Pheng-Ann Heng
Submitted to IEEE Transactions on Pattern Analysis and Machine Intelligence (**TPAMI**)
- [4] *Deep Attentional Features for Prostate Segmentation in 3D Transrectal Ultrasound*
Yi Wang, Haoran Dou, **Xiaowei Hu**, Lei Zhu, Xin Yang, Ming Xu, et al
Submitted to IEEE Transactions on Medical Imaging (**TMI**)
- [5] *Anonymous*
Yang Tian, Ruihui Li, Xiao Tang, **Xiaowei Hu**, Shengdong Zhao, Chi-Wing Fu, Pheng-Ann Heng
Submitted to Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (**IMWUT**)

WORK EXPERIENCE

- Research Intern, The Chinese University of Hong Kong** 06/2015 - 08/2015
Advisor: Prof. Pheng-Ann Heng
Worked on deep learning techniques for vehicle detection
- Research Intern, Hong Kong Baptist University** 08/2014
★ Selected by the outstanding undergraduate research opportunity program
Advisor: Prof. Yiu-Wing Leung & Doc. Hai Liu
Worked on fault-tolerant algorithms for cognitive radio networks
- Undergraduate Research Assistant, South China University of Technology** 01/2013 - 07/2016
Advisor: Prof. Xuemiao Xu
Led a team and worked on a project of the intelligent transportation system (authorized three China invention patents)

PROFESSIONAL ACTIVITIES

Invited Talk

- ◇ AI Massive Open Online Course on “Direction-aware Spatial Context Features for Shadow Detection” July 2018

Reviewer

- ◇ IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2019
- ◇ International Conference on Image, Video Processing and Artificial Intelligence (IVPAI), 2018
- ◇ Neurocomputing

Teaching Assistant at CUHK

- ◇ CSCI5210: Advanced Topics in Computer Graphics and Visualization Spring 2018
- ◇ ENGG2020: Digital Logic and Systems Fall 2016-2018
- ◇ ENGG1410A: Linear Algebra and Vector Calculus for Engineers Spring 2017