

XIAOWEI HU

Email: xw.hu@cse.cuhk.edu.hk ◊ Homepage: <https://xw-hu.github.io/>

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

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] *Depth-attentional Features for Single-image Rain Removal*

Xiaowei Hu, Chi-Wing Fu, Lei Zhu, and Pheng-Ann Heng

IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), 2019

[2] *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**)

[3] *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**)

[4] *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

[5] *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**), 2018

[6] *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**)

[7] *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

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

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

Teaching Assistant at CUHK

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