XIAOWEI HU

Email: xwhu@cse.cuhk.edu.hk

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

EDUCATION

The Chinese University of Hong Kong (CUHK)   08/2016 - Present
Ph.D. in Computer Science and Engineering   Expected graduation date: 07/2020
Advisor: Prof. Pheng-Ann Heng & Prof. Chi-Wing Fu

South China University of Technology (SCUT)   09/2012 - 07/2016
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

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] *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**), 2019

[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**), 2019

[4] *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**)

[5] *R^{3}Net: 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] *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 Attentive 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