

Boxin Shi

CONTACT INFORMATION

Boya Young Fellow Assistant Professor & Research Professor
Department of Computer Science and Technology, School of EECS, Peking University
Address: 505 Yanyuan Building, Peking University, Haidian District, Beijing, 100080, China
Web: <http://ci.idm.pku.edu.cn> E-mail: shiboxin@pku.edu.cn Phone: +86-10-62758116

RESEARCH INTERESTS

Computational photography (unconventional sensor, computational illumination, shape-from-X)
Computer vision (physics-based vision, low-level vision, 3D vision)

EDUCATION

The University of Tokyo (UTokyo), Tokyo, Japan Oct. 2010 – Sep. 2013

- Ph.D. in information science and technology
- Advisor: Prof. Katsushi Ikeuchi
- Thesis title: Photometric Stereo for General Reflectance and Lighting
- GPA: 4.0/4.0

Peking University (PKU), Beijing, China Sep. 2007 – Jul. 2010

- Master of Engineering in signal and information processing, with title “Excellent Graduates”
- Advisor: Prof. Chao Xu
- GPA: 90.52/100 (3.92/4.0)

Beijing Univ. of Posts and Telecom. (BUPT), Beijing, China Sep. 2003 – Jun. 2007

- Bachelor of Engineering in information security, with title “Excellent Graduates”
- GPA: 88.92/100 (3.83/4.0); Rank (official): 1/57

WORKING EXPERIENCE

Institute for Artificial Intelligence, PKU Mar. 2020 – present

- Assistant Director

Dept. of Computer Science and Technology, School of EECS, PKU Nov. 2017 – present

- Principle Investigator of the Camera Intelligence Group
- Faculty member at Institute of Digital Media (National Engineering Lab for Video Technology)
- Research topic: Computational photography and computer vision

Artificial Intelligence Research Center, AIST Apr. 2016 – Nov. 2017

- Group: Living Intelligence Research Team
- Title: Researcher
- Research topic: 3D scene understanding for robot and human communication

Rapid-Rich Object Search (ROSE) Lab, NTU Oct. 2015 – Mar. 2016

- Advisor: Prof. Alex Chichung Kot
- Title: Research fellow
- Research topic: Estimating photometric properties for community photo collections

Vision, Graphics and Computational Design Group, SUTD Oct. 2014 – Oct. 2015

- Advisor: Prof. Sai-Kit Yeung
- Title: Postdoctoral fellow
- Research topic: Photometric-based 3D reconstruction using big visual data

Camera Culture Group, MIT Media Lab Oct. 2013 – Oct. 2014

- Advisor: Prof. Ramesh Raskar
- Title: Postdoctoral fellow
- Research topic: Computational imaging with unconventional cameras

Visual Computing Group, Microsoft Research Asia Jul. 2012 – Oct. 2012

- Advisor: Dr. Yasuyuki Matsushita
- Title: Research intern
- Research topic: Photometric stereo with uncontrolled illumination and camera

Department of ECE, National University of Singapore Jul. 2011 – Oct. 2011

- Advisor: Prof. Ping Tan
- Title: Research engineer
- Research topic: Reflectance modeling and radiometric image analysis

- Advisor: Dr. Yasuyuki Matsushita
- Title: Research intern
- Research topic: Photometric stereo and radiometric calibration

HONORS AND AWARDS	P&G Faculty Fellowship, Peking University	2020
	Excellent of Teaching Award, Peking University	2020
	Young Scientist, Beijing Academy of Artificial Intelligence	2020
	First Prize (sci. & eng. group), Teaching Competition for Young Faculties, Peking University	2019
	Boya Young Fellow, Peking University	2018
	The Recruitment Program of Global Experts (Youth Program), Chinese government	2017
	Best Paper, ICCV Workshop - Physics Based Vision Meets Deep Learning	2017
	Outstanding Reviewer, IEEE Conference on Computer Vision and Pattern Recognition (CVPR)	2017
	Best Overall Venture Pitch, CVPR Workshop - Vision Industry and Entrepreneur	2016
	Best Paper Runner-up, International Conference on Computational Photography (ICCP)	2015
	SUTD-MIT Joint Postdoctoral Fellowship, SUTD	2013-2015
	Doctoral Consortium, IEEE Conference on Computer Vision and Pattern Recognition (CVPR)	2013
	MEXT Global 30 Scholarship, Japanese government	2010-2013
	Excellent Master Graduates, Peking University	2010
	Excellent Internship “Stars of Tomorrow”, Microsoft Research Asia	2010
	Yang Fuqing & Wang Yangyuan Academician Scholarship, Peking University	2009
	Huang Ying Scholarship, Peking University	2008
	Excellent Graduates in Beijing (top 1%), Education Committee of Beijing	2007
	Excellent Bachelor Thesis (top 2%), Academic Committee of BUPT	2007
	First Prize, Students Creative Award, Academic Committee of BUPT	2007
National Scholarship (top 1%, Rank 1 student only), Chinese government	2005, 2006	
Second Prize, National Undergraduates Electronic Design Competition (Beijing Section)	2005	

PUBLICATIONS *corresponding author; #joint first authors

Book Chapter

- [1] **Boxin Shi**, Jinfa Yang*, Jinwei Chen, Ruihua Zhang, and Rui Chen, “Recent progress in shape from polarization”, In *Advances in Photometric 3D-Reconstruction*, Chapter 6, Springer, Sep. 2020.

International Journal

- [1] Lixiong Chen, Yinqiang Zheng, **Boxin Shi***, Art Subpa-Asa, and Imari Sato, “A microfacet-based model for photometric stereo with general isotropic reflectance”, In *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, Volume 43, Issue 1, Pages 48-61, 2021.
- [2] Renjie Wan*, **Boxin Shi***, Haoliang Li, Ling-Yu Duan, and Alex C. Kot, “Face image reflection removal”, In *International Journal of Computer Vision (IJCV)*, Volume 129, Pages 385-399, 2021.
- [3] Huijing Zhan, Jie Lin, Kenan Emir Ak, **Boxin Shi***, Ling-Yu Duan, and Alex C. Kot, “A3-FKG: Attentive attribute-aware fashion knowledge graph for outfit preference prediction”, In *IEEE Transactions on Multimedia (TMM)*, 2021. (Early access)
- [4] Huijing Zhan, Chenyu Yi, **Boxin Shi***, Jie Lin, Ling-Yu Duan, and Alex C. Kot, “Pose-normalized and appearance-preserved street-to-shop clothing image generation and feature learning”, In *IEEE Transactions on Multimedia (TMM)*, Volume 23, Issue 1, Pages 133-144, 2021.
- [5] Tianyu Guo, Chang Xu*, **Boxin Shi***, Chao Xu, and Dacheng Tao, “Optimizing latent distributions for non-adversarial generative networks”, In *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, 2020. (Early access)
- [6] Hiroaki Santo, Masaki Samejima, Yusuke Sugano, **Boxin Shi**, and Yasuyuki Matsushita, “Deep photometric stereo networks for determining surface normal and reflectances”, In *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, 2020. (Early access)
- [7] Guanying Chen, Kai Han, **Boxin Shi**, Yasuyuki Matsushita, and Kwan-Yee K. Wong, “Deep photometric stereo for non-Lambertian surfaces”, In *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, 2020. (Early access)

- [8] Zhipeng Mo, **Boxin Shi***, Sai-Kit Yeung, and Yasuyuki Matsushita, “Ambiguity-free radiometric calibration for Internet photo collections”, In *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, Volume 42, Issue 7, Pages 1670-1684, 2020.
- [9] Renjie Wan, **Boxin Shi**, Haoliang Li, Ling-Yu Duan, Ah-Hwee Tan, and Alex C. Kot, “CoRRN: Cooperative reflection removal network”, In *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, Volume 42, Issue 12, Pages 2969-2982, 2020.
- [10] Min Li, Zhenglong Zhou, Zhe Wu, **Boxin Shi***, Changyu Diao, and Ping Tan*, “Multi-view photometric stereo: A robust solution and benchmark dataset for spatially varying isotropic materials”, In *IEEE Transactions on Image Processing (TIP)*, Volume 29, Issue 1, Pages 4159-4173, 2020.
- [11] Tianyu Guo, Chang Xu, Shiyi He, **Boxin Shi**, Chao Xu, and Dacheng Tao, “Robust student network learning”, In *IEEE Transactions on Neural Networks and Learning Systems (TNNLS)*, Volume 31, Issue 7, Pages 2455-2468, 2020.
- [12] Weiwei Wan, **Boxin Shi**, Zijian Wang, and Rui Fukui, “Multirobot object transport via robust Caging”, In *IEEE Transactions on Transactions on System, Man, and Cybernetics: Systems (TSMC)*, Volume 50, Issue 1, Pages 270-280, 2020.
- [13] Yanbo Fan, Shuchen Weng, Yong Zhang, **Boxin Shi**, and Yi Zhang, “Context-aware cross-attention for skeleton-based human action recognition”, In *IEEE Access*, Volume 8, Pages 15280-15290, 2020.
- [14] Ce Wang, **Boxin Shi***, and Ling-Yu Duan, “Learning to remove reflections from windshield images”, In *Signal Processing: Image Communication (SPIC)*, Volume 78, Pages 94-102, 2019.
- [15] Qian Zheng, Ajay Kumar, **Boxin Shi**, and Gang Pan, “Numerical reflectance compensation for non-Lambertian photometric stereo”, In *IEEE Transactions on Image Processing (TIP)*, Volume 28, Issue 7, Pages 3177-3191, 2019.
- [16] Huijing Zhan*, **Boxin Shi***, Ling-Yu Duan, and Alex C. Kot, “DeepShoe: An improved multi-task view-invariant CNN for street-to-shop shoe retrieval”, In *Computer Vision and Image Understanding (CVIU)*, Volume 180, Pages 23-33, 2019.
- [17] **Boxin Shi***, Zhipeng Mo, Zhe Wu, Dinglong Duan, Sai-Kit Yeung, and Ping Tan, “A benchmark dataset and evaluation for non-Lambertian and uncalibrated photometric stereo”, In *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, Volume 41, Issue 2, Pages 271-284, 2019.
- [18] Liang Xie, Yuhua Xu, Xiaohu Zhang, Wei Bao, Chenpeng Tong, and **Boxin Shi**, “A self-calibrated photo-geometric depth camera”, In *Visual Computer*, Volume 35, Issue 1, Pages 99-108, 2019.
- [19] Xian-Hua Han, Yongqing Sun, Jian Wang, **Boxin Shi**, Yinqiang Zheng, and Yen-Wei Chen, “Spectral representation via data-guided sparsity for hyperspectral image super-resolution”, In *Sensors*, Volume 19, Issue 24, Pages 5401, 2019.
- [20] Xian-Hua Han, **Boxin Shi**, and Yinqiang Zheng, “Self-similarity constrained sparse representation for hyperspectral image super-resolution”, In *IEEE Transactions on Image Processing (TIP)*, Volume 27, Issue 11, Pages 5625-5637, 2018.
- [21] Renjie Wan, **Boxin Shi**, Ling-Yu Duan, Ah-Hwee Tan, Wen Gao, and Alex C. Kot, “Region-aware reflection removal with unified content and gradient priors”, In *IEEE Transactions on Image Processing (TIP)*, Volume 27, Issue 6, Pages 2927-2941, 2018.
- [22] Achuta Kadambi*, Vage Taamazyan, **Boxin Shi***, and Ramesh Raskar, “Depth sensing using geometrically constrained polarization normals”, In *International Journal of Computer Vision (IJCV)*, Volume 125, Issue 1-3, Pages 34-51, 2017. (invited by Special Issue of **Best Papers** from ICCV 2015, 9 out of 1700).
- [23] Huijing Zhan*, **Boxin Shi***, and Alex C. Kot, “Cross-domain shoe retrieval with a semantic hierarchy of attribute classification Network”, In *IEEE Transactions on Image Processing (TIP)*, Volume 26, Issue 12, Pages 5867-5881, 2017.
- [24] Achuta Kadambi, Hang Zhao, **Boxin Shi**, and Ramesh Raskar, “Occluded imaging with time of flight sensors”, In *ACM Transactions on Graphics (TOG)*, Volume 35, Issue 2, Article No. 15, 2016.
- [25] Si Li and **Boxin Shi***, “Photometric stereo for general isotropic reflectances by spherical linear interpolation”, In *Optical Engineering (OE)*, Volume 54, Issue 8, 083104, 2015.
- [26] Dan Raviv, Wei Zhao, Carrie McKnelly, Athina Papadopoulou, Achuta Kadambi, **Boxin Shi**, Shai Hirsch, Daniel Dikovsky, Mike Zyacki, Carlos Olguin, Ramesh Raskar, and Skylar Tibbits, “Active printed materials for complex self-evolving deformations”, In *Scientific Reports*, Volume 4, Issue 7422, 2014. (Open access at nature.com, doi:10.1038/srep07422)

- [27] **Boxin Shi***, Ping Tan, Yasuyuki Matsushita, and Katsushi Ikeuchi, “Bi-polynomial modeling of low-frequency reflectances”, In *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, Volume 36, Issue 6, Pages 1078-1091, 2014.
- [28] Joon-Young Lee, Yasuyuki Matsushita, **Boxin Shi**, In-So Kweon, and Katsushi Ikeuchi, “Radiometric calibration by rank minimization”, In *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, Volume 35, Issue 1, Pages 144-156, 2013.

International Conference

- [1] Peiqi Duan, Zihao W. Wang, Xinyu Zhou, Yi Ma, and **Boxin Shi***, “EventZoom: Learning to denoise and super resolve neuromorphic events”, In *Proc. IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, Virtual (online), Jun. 2021. (Oral)
- [2] Yongjie Zhu, Yinda Zhang, Si Li*, and **Boxin Shi***, “Spatially-varying outdoor lighting estimation from intrinsics”, In *Proc. IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, Virtual (online), Jun. 2021. (Oral)
- [3] Yuchen Hong#, Qian Zheng#, Lingran Zhao, Xudong Jiang, Alex C. Kot, and **Boxin Shi***, “Panoramic image reflection removal”, In *Proc. IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, Virtual (online), Jun. 2021.
- [4] Qian Zheng*, **Boxin Shi***, Jinnan Chen, Xudong Jiang, Ling-Yu Duan, and Alex C. Kot, “Single image reflection removal with absorption effect”, In *Proc. IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, Virtual (online), Jun. 2021.
- [5] Xu Cao, **Boxin Shi**, Fumio Okura, and Yasuyuki Matsushita, “Normal integration via inverse plane fitting with minimum point-to-plane distance”, In *Proc. IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, Virtual (online), Jun. 2021.
- [6] Heng Guo, Fumio Okura, **Boxin Shi**, Takuya Funatomi, Yasuhiro Mukaigawa, and Yasuyuki Matsushita, “Multispectral photometric stereo for spatially-varying spectral reflectances: A well posed problem?”, In *Proc. IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, Virtual (online), Jun. 2021.
- [7] Yajing Zheng#, Lingxiao Zheng#, Zhaofei Yu, Lingran Zhao, **Boxin Shi**, Yonghong Tian, and Tiejun Huang, “High-speed image reconstruction through short-term plasticity for spiking cameras”, In *Proc. IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, Virtual (online), Jun. 2021.
- [8] Yongjie Zhu, Jiajun Tang, Si Li, and **Boxin Shi***, “DeRenderNet: Intrinsic image decomposition of urban scenes with shape-(in)dependent shading rendering”, In *Proc. International Conference on Computational Photography (ICCP)*, Haifa, Israel, May. 2021. (Oral)
- [9] Chu Zhou, Hang Zhao, Jin Han, Chang Xu, Chao Xu, Tiejun Huang, and **Boxin Shi***, “UnModNet: Learning to unwrap a modulo image for high dynamic range imaging”, In *Proc. Thirty-fourth Conference on Neural Information Processing Systems (NeurIPS)*, Vancouver, Canada, Dec. 2020.
- [10] Zhuokun Yao, Kun Li*, Ying Fu, Haofeng Hu, and **Boxin Shi***, “GPS-Net: Graph-based photometric stereo network”, In *Proc. Thirty-fourth Conference on Neural Information Processing Systems (NeurIPS)*, Vancouver, Canada, Dec. 2020.
- [11] Xu Liu, Chengtao Li, Jian Wang, Jingbo Wang, **Boxin Shi***, and Xiaodong He*, “Group contextual encoding for 3D point clouds”, In *Proc. Thirty-fourth Conference on Neural Information Processing Systems (NeurIPS)*, Vancouver, Canada, Dec. 2020.
- [12] Xu Liu, Jiayan Cao, Qianqian Bi, Jian Wang, **Boxin Shi**, and Yichen Wei, “Dense point diffusion for 3D object detection”, In *Proc. International Conference on 3D Vision (3DV)*, Fukuoka, Japan, Nov. 2020.
- [13] Shuchen Weng, Wenbo Li, Dawei Li, Hongxia Jin, and **Boxin Shi***, “Conditional image repainting via semantic bridge and piecewise value function”, In *Proc. European Conference on Computer Vision (ECCV)*, Glasgow, UK, Aug. 2020.
- [14] Yunhao Ba, Alex Ross Gilbert, Franklin Wang, Jinfang Yang, Rui Chen, Yiqin Wang, Lei Yan, **Boxin Shi***, and Achuta Kadambi*, “Deep shape from polarization”, In *Proc. European Conference on Computer Vision (ECCV)*, Glasgow, UK, Aug. 2020.
- [15] Bin He, Ce Wang, **Boxin Shi**, and Ling-Yu Duan, “FHDe²Net: Full high definition demoiring network”, In *Proc. European Conference on Computer Vision (ECCV)*, Glasgow, UK, Aug. 2020.
- [16] Guanying Chen, Michael Waechter, **Boxin Shi**, Kwan-Yee Kenneth Wong, and Yasuyuki Matsushita, “What is learned in deep uncalibrated photometric stereo?”, In *Proc. European Conference on Computer Vision (ECCV)*, Glasgow, UK, Aug. 2020.

- [17] Yuchen Hong, Youwei Lyu, Si Li, and **Boxin Shi**, “Near-infrared image guided reflection removal”, In Proc. IEEE International Conference on Multimedia & Expo (**ICME**), London, UK, Jul. 2020. (Oral)
- [18] Jin Han, Chu Zhou, Peiqi Duan, Yehui Tang, Chang Xu, Chao Xu, Tiejun Huang, and **Boxin Shi***, “Neuromorphic camera guided high dynamic range imaging”, In Proc. IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), Seattle, WA, USA, Jun. 2020.
- [19] Zihao W. Wang[#], Peiqi Duan[#], Oliver Cossairt, Aggelos Katsaggelos, Tiejun Huang, and **Boxin Shi***, “Joint filtering of intensity images and neuromorphic events for high-resolution noise-robust imaging”, In Proc. IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), Seattle, WA, USA, Jun. 2020.
- [20] Shuchen Weng[#], Wenbo Li[#], Dawei Li, Hongxia Jin, and **Boxin Shi***, “MISC: Multi-condition injection and spatially-adaptive compositing for conditional person rendering”, In Proc. IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), Seattle, WA, USA, Jun. 2020.
- [21] Renjie Wan*, **Boxin Shi***, Haoliang Li, Ling-Yu Duan, and Alex C. Kot, “Reflection scene separation from a single image”, In Proc. IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), Seattle, WA, USA, Jun. 2020.
- [22] Qian Zheng*, Jinnan Chen, Zhan Lu, **Boxin Shi***, Xudong Jiang, Kim-Hui Yap, Ling-Yu Duan, and Alex C. Kot, “What does plate glass reveal about camera calibration?”, In Proc. IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), Seattle, WA, USA, Jun. 2020.
- [23] Xu Cao, Michael Waechter, **Boxin Shi**, Ye Gao, Bo Zheng, and Yasuyuki Matsushita, “Stereoscopic flash and no-flash photography for shape and albedo recovery”, In Proc. IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), Seattle, WA, USA, Jun. 2020.
- [24] Shaohui Liu, Yinda Zhang, Songyou Peng, **Boxin Shi**, Marc Pollefeys, and Zhaopeng Cui, “DIST: Rendering deep implicit signed distance function with differentiable sphere tracing”, In Proc. IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), Seattle, WA, USA, Jun. 2020.
- [25] Tianyu Guo, Chang Xu, Jiajun Huang, Yunhe Wang, **Boxin Shi**, Chao Xu, and Dacheng Tao, “On positive-unlabeled classification in GAN”, In Proc. IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), Seattle, WA, USA, Jun. 2020.
- [26] Hanting Chen[#], Yunhe Wang[#], Chunjing Xu, **Boxin Shi**, Chao Xu, Qi Tian, and Chang Xu, “AdderNet: Do we really need multiplications in deep learning?”, In Proc. IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), Seattle, WA, USA, Jun. 2020. (Oral)
- [27] Hanting Chen, Yunhe Wang, Han Shu, Yehui Tang, Chunjing Xu, **Boxin Shi**, Chao Xu, Qi Tian, and Chang Xu, “Frequency domain compact 3D convolutional neural networks”, In Proc. IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), Seattle, WA, USA, Jun. 2020.
- [28] Zhaohui Yang, Yunhe Wang, Xinghao Chen, **Boxin Shi**, Chao Xu, Chunjing Xu, Qi Tian, and Chang Xu, “CARS: Continuous evolution for efficient neural architecture search”, In Proc. IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), Seattle, WA, USA, Jun. 2020.
- [29] Yehui Tang, Yunhe Wang, Yixing Xu, Hanting Chen, **Boxin Shi**, Chao Xu, Chunjing Xu, Qi Tian, and Chang Xu, “A semi-supervised assessor of neural architectures”, In Proc. IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), Seattle, WA, USA, Jun. 2020.
- [30] Yehui Tang*, Shan You*, Chang Xu*, Jin Han, Chen Qian, **Boxin Shi***, Chao Xu, and Changshui Zhang, “Reborn filters: Pruning convolutional neural networks with limited data”, In Proc. AAAI Conference on Artificial Intelligence (**AAAI**), New York City, NY, USA, Feb. 2020.
- [31] Yehui Tang, Yunhe Wang, Yixing Xu, **Boxin Shi**, Chao Xu, Chunjing Xu, and Chang Xu, “Beyond dropout: Feature map distortion to regularize deep neural networks”, In Proc. AAAI Conference on Artificial Intelligence (**AAAI**), New York City, NY, USA, Feb. 2020.
- [32] Hanting Chen, Yunhe Wang, Han Shu, Changyuan Wen, Chunjing Xu, **Boxin Shi**, Chao Xu, and Chang Xu, “Distilling portable generative adversarial networks for image translation”, In Proc. AAAI Conference on Artificial Intelligence (**AAAI**), New York City, NY, USA, Feb. 2020.
- [33] Youwei Lyu[#], Zhaopeng Cui[#], Si Li*, Marc Pollefeys, and **Boxin Shi***, “Reflection separation using a pair of unpolarized and polarized images”, In Proc. Thirty-third Conference on Neural Information Processing Systems (**NeurIPS**), Vancouver, Canada, Dec. 2019. (Spotlight)

- [34] Tianyu Guo*, Chang Xu*, **Boxin Shi***, Chao Xu, and Dacheng Tao, “Learning from bad data via generation”, In Proc. Thirty-third Conference on Neural Information Processing Systems (**NeurIPS**), Vancouver, Canada, Dec. 2019.
- [35] Qian Zheng[#]*, Yiming Jia[#], **Boxin Shi***, Xudong Jiang, Ling-Yu Duan, and Alex C. Kot, “SPLINE-Net: Sparse photometric stereo through lighting interpolation and normal estimation networks”, In Proc. International Conference on Computer Vision (**ICCV**), Seoul, Korea, Oct. 2019.
- [36] Bin He, Ce Wang, **Boxin Shi**, and Ling-Yu Duan, “Mop moire patterns using MopNet”, In Proc. International Conference on Computer Vision (**ICCV**), Seoul, Korea, Oct. 2019.
- [37] Daiqian Ma, Renjie Wan, **Boxin Shi**, Alex C. Kot, and Ling-Yu Duan, “Learning to jointly generate and separate reflections”, In Proc. International Conference on Computer Vision (**ICCV**), Seoul, Korea, Oct. 2019.
- [38] Hanting Chen, Yunhe Wang, Chang Xu, Zhaohui Yang, Chuanjian Liu, **Boxin Shi**, Chunjing Xu, Chao Xu, and Qi Tian, “Data-free learning of student networks”, In Proc. International Conference on Computer Vision (**ICCV**), Seoul, Korea, Oct. 2019.
- [39] Zihao W. Wang, Weixin Jiang, Kuan He, **Boxin Shi**, Aggelos Katsaggelos, and Oliver Cossairt, “Event-driven video frame synthesis”, In Proc. International Conference on Computer Vision (**ICCV**) Workshop PBDL, Seoul, Korea, Oct. 2019.
- [40] Daiqian Ma, Yan Bai, Ce Wang, Renjie Wan, **Boxin Shi**, and Ling-Yu Duan, “See through the windshield from surveillance camera”, In Proc. ACM Multimedia Conference (**MM**), Nice, France, Oct. 2019.
- [41] Qian Zheng*, **Boxin Shi***, Xudong Jiang, Ling-Yu Duan, and Alex C. Kot, “Denoising adversarial networks for rain removal and reflection removal”, In Proc. International Conference on Image Processing (**ICIP**), Taiwan, China, Sep. 2019.
- [42] Huijing Zhan*, **Boxin Shi***, Jiawei Chen, Qian Zheng, Ling-Yu Duan, and Alex C. Kot, “Fashion recommendation on street images”, In Proc. International Conference on Image Processing (**ICIP**), Taiwan, China, Sep. 2019.
- [43] Lin Zhang, Jianbo Zhao, Si Li, **Boxin Shi**, and Ling-Yu Duan, “From market to dish: Multi-ingredient image recognition for personalized recipe recommendation”, In Proc. IEEE International Conference on Multimedia & Expo (**ICME**), Shanghai, China, Jul. 2019.
- [44] Ce Wang, Renjie Wan, Feng Gao, **Boxin Shi**, and Ling-Yu Duan, “Learning to remove reflections for text images”, In Proc. IEEE International Conference on Multimedia & Expo (**ICME**), Shanghai, China, Jul. 2019.
- [45] Guanying Chen, Kai Han, **Boxin Shi**, Yasuyuki Matsushita, and Kwan-Yee K. Wong, “Self-calibrating deep photometric stereo networks”, In Proc. IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), Long Beach, CA, USA, Jun. 2019. (Oral)
- [46] Zhaohui Yang, Yunhe Wang, Hanting Chen, Chuanjian Liu, **Boxin Shi**, Chao Xu, Chunjing Xu, Chang Xu, “LegoNet: Efficient convolutional neural networks with Lego filters”, In Proc. International Conference on Machine Learning (**ICML**), Long Beach, CA, USA, Jun. 2019.
- [47] Tianyu Guo, Chang Xu, **Boxin Shi**, Chao Xu, and Dacheng Tao, “Smooth deep image generator from noises”, In Proc. AAAI Conference on Artificial Intelligence (**AAAI**), Honolulu, HI, USA, Jan. 2019.
- [48] Bin He, Feng Gao, Daiqian Ma, **Boxin Shi**, and Ling-Yu Duan, “ChipGAN: A generative adversarial network for Chinese ink wash painting style transfer”, In Proc. ACM Multimedia Conference (**MM**), Seoul, Korea, Oct. 2018.
- [49] Xian-Hua Han, **Boxin Shi**, and Yinqiang Zheng, “SSF-CNN: Spatial and spectral fusion with CNN for hyper-spectral image super-resolution”, In Proc. IEEE International Conference on Image Processing (**ICIP**), Athens, Greece, Oct. 2018.
- [50] Xian-Hua Han, **Boxin Shi**, and Yinqiang Zheng, “Residual HSRCNN: Residual hyper-spectral reconstruction CNN from an RGB Image”, In Proc. International Conference on Pattern Recognition (**ICPR**), Beijing, China, Aug. 2018.
- [51] Zhipeng Mo, **Boxin Shi***, Feng Lu, Sai-Kit Yeung, and Yasuyuki Matsushita, “Uncalibrated photometric stereo under natural illumination”, In Proc. IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), Salt Lake City, UT, USA, Jun. 2018.
- [52] Daniel Teo Guangwei, **Boxin Shi***, Yinqiang Zheng, and Sai-Kit Yeung, “Self-calibrating polarising radiometric calibration”, In Proc. IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), Salt Lake City, UT, USA, Jun. 2018.

- [53] Renjie Wan*, **Boxin Shi***, Ling-Yu Duan, Ah-Hwee Tan, and Alex C. Kot, “CRNN: Multi-scale guided concurrent reflection removal network”, In Proc. IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), Salt Lake City, UT, USA, Jun. 2018.
- [54] Bing Li, Chia-Wen Lin, **Boxin Shi**, Tiejun Huang, Wen Gao, and C.-C. Jay Kuo, “Depth-aware stereo video retargeting”, In Proc. IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), Salt Lake City, UT, USA, Jun. 2018.
- [55] Xian-Hua Han, Jian Wang, **Boxin Shi**, Yinqiang Zheng, and Yen-Wei Chen, “Hyper-spectral image super-resolution using non-negative spectral representation with data-guided sparsity”, In Proc. IEEE International Symposium on Multimedia (**ISM**), Taiwan, China, Dec. 2017.
- [56] Renjie Wan*, **Boxin Shi***, Ling-Yu Duan, Tan Ah Hwee, and Alex C. Kot, “Benchmarking single-image reflection removal algorithms”, In Proc. International Conference on Computer Vision (**ICCV**), Venice, Italy, Oct. 2017.
- [57] Lixiong Chen, Yinqiang Zheng, **Boxin Shi**, Art Subpa-Asa, and Imari Sato, “A microfacet-based reflectance model for photometric stereo with highly specular surfaces”, In Proc. International Conference on Computer Vision (**ICCV**), Venice, Italy, Oct. 2017.
- [58] Hiroaki Santo, Masaki Samejima, Yusuke Sugano, **Boxin Shi**, and Yasuyuki Matsushita, “Deep photometric stereo network”, In Proc. International Conference on Computer Vision (**ICCV**) Workshop PBDL, Venice, Italy, Oct. 2017. (**Best Paper**)
- [59] Huijing Zhan, **Boxin Shi**, and Alex C. Kot, “Street-to-shope shoe retrieval with multi-scale viewpoint invariant triplet network”, In Proc. International Conference on Image Processing (**ICIP**), Beijing, China, Sep. 2017. (Oral)
- [60] Nevrez Imamoglu, Chi Zhang, Yuming Fang, Wataru Shimoda, and **Boxin Shi**, “Saliency detection by forward and backward cues in deep-CNN”, In Proc. International Conference on Image Processing (**ICIP**), Beijing, China, Sep. 2017. (Oral)
- [61] Huijing Zhan, **Boxin Shi**, and Alex C. Kot, “Street-to-shop shoe retrieval”, In Proc. British Machine Vision Conference (**BMVC**), London, UK, Sep. 2017.
- [62] Zhipeng Mo, **Boxin Shi***, Sai-Kit Yeung, and Yasuyuki Matsushita, “Radiometric calibration for Internet photo collections”, In Proc. IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), Honolulu, HI, USA, Jul. 2017. (Spotlight)
- [63] Zhaopeng Cui, Jinwei Gu, **Boxin Shi**, Ping Tan, and Jan Kautz, “Polarimetric multi-view stereo”, In Proc. IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), Honolulu, HI, USA, Jul. 2017.
- [64] Renjie Wan, **Boxin Shi**, Tan Ah Hwee, and Alex C. Kot, “Sparsity based reflection removal using external patches”, In Proc. IEEE International Conference on Multimedia & Expo (**ICME**), Hong Kong, China, Jul. 2017. (Oral)
- [65] Huijing Zhan, **Boxin Shi**, and Alex C. Kot, “Fashion analysis with a subordinate attribute classification network”, In Proc. IEEE International Conference on Multimedia & Expo (**ICME**), Hong Kong, China, Jul. 2017. (Oral)
- [66] Huijing Zhan, **Boxin Shi**, and Alex C. Kot, “Cross-domain show retrieval using a three-level deep feature representation”, In Proc. IEEE International Symposium on Circuits & Systems (**ISCAS**), Baltimore, MD, USA, May. 2017. (Oral)
- [67] Renjie Wan, **Boxin Shi**, Tan Ah Hwee, and Alex C. Kot, “Depth of field guided reflection removal”, In Proc. IEEE International Conference on Image Processing (**ICIP**), Phoenix, AZ, USA, Sep. 2016. (Oral)
- [68] **Boxin Shi***, Zhe Wu, Zhipeng Mo, Dinglong Duan, Sai-Kit Yeung, and Ping Tan, “A benchmark dataset and evaluation for non-Lambertian and uncalibrated photometric stereo”, In Proc. IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), Las Vegas, NV, USA, Jun. 2016.
- [69] Achuta Kadambi, Vage Taamazyan, **Boxin Shi**, and Ramesh Raskar, “Polarized 3D: High-quality depth sensing with polarization cues”, In Proc. International Conference on Computer Vision (**ICCV**), Santiago, Chile, Dec. 2015. (Oral)
- [70] Jian Wang, Yasuyuki Matsushita, **Boxin Shi**, and Aswin C. Sankaranarayanan, “Photometric stereo with small angular variations”, In Proc. International Conference on Computer Vision (**ICCV**), Santiago, Chile, Dec. 2015.
- [71] Christy Fernandez-Cull, Hang Zhao, **Boxin Shi**, Brian Tyrrell, Joseph Lin, and Ramesh Raskar, “Snapshot on-chip HDR ROIC architectures”, OSA Computational Optical Sensing and Imaging (**COSI**), Arlington, VA, USA, Jun. 2015. (Oral)

- [72] Hang Zhao, **Boxin Shi**^{*}, Christy Fernandez-Cull, Sai-Kit Yeung, and Ramesh Raskar, “Unbounded high dynamic range photography using a modulo camera”, In Proc. International Conference on Computational Photography (**ICCP**), Houston, TX, USA, Apr. 2015. (Oral, **Best paper runner-up**)
- [73] Munehiko Sato[#], Shigeo Yoshida[#], Alex Olwal, **Boxin Shi**, Atsushi Hiyama, Tomohiro Tanikawa, Michitaka Hirose, and Ramesh Raskar, “SpecTrans: Versatile material classification for interaction with textureless, specular and transparent surfaces”, In Proc. SIGCHI Conference on Human Factors in Computing Systems (**CHI**), Seoul, Korea, Apr. 2015. (Oral)
- [74] **Boxin Shi**, Kenji Inose, Yasuyuki Matsushita, Ping Tan, Sai-Kit Yeung, and Katsushi Ikeuchi, “Photometric stereo using Internet images”, In Proc. International Conference on 3D Vision (**3DV**), Tokyo, Japan, Dec. 2014.
- [75] R. Hamilton Shepard, Christy Fernandez-Cull, Ramesh Raskar, **Boxin Shi**, Christopher Barsi, and Hang Zhao, “Optical design and characterization of an advanced computational imaging system”, In Proc. **SPIE** Optics and Photonics for Information Processing VIII, San Diego, CA, USA, Aug. 2014. (Oral)
- [76] **Boxin Shi**^{*}, Hang Zhao, Moshe Ben-Ezra, Sai-Kit Yeung, Christy Fernandez-Cull, R. Hamilton Shepard, Christopher Barsi, and Ramesh Raskar, “Sub-pixel layout for super-resolution with images in the octic group”, In Proc. European Conference on Computer Vision (**ECCV**), Zurich, Switzerland, Sep. 2014.
- [77] **Boxin Shi**^{*}, Ping Tan, Yasuyuki Matsushita, and Katsushi Ikeuchi, “Elevation angle from reflectance monotonicity: Photometric stereo for general isotropic reflectances”, In Proc. European Conference on Computer Vision (**ECCV**), Florence, Italy, Oct. 2012.
- [78] **Boxin Shi**^{*}, Ping Tan, Yasuyuki Matsushita, and Katsushi Ikeuchi, “A biquadratic reflectance model for radiometric image analysis”, In Proc. IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), Providence, RI, USA, Jun. 2012.
- [79] Joon-Young Lee, **Boxin Shi**, Yasuyuki Matsushita, In-So Kweon, and Katsushi Ikeuchi, “Radiometric calibration by transform invariant low-rank structure”, In Proc. IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), Colorado Springs, CO, USA, Jun. 2011.
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- [81] **Boxin Shi**^{*}, Yasuyuki Matsushita, Yichen Wei, Chao Xu, and Ping Tan, “Self-calibrating photometric stereo”, In Proc. IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), San Francisco, CA, USA, Jun. 2010. (Oral)
- [82] **Boxin Shi**^{*}, Yangxi Li, Lin Liu, and Chao Xu, “Color correction and compression for multi-view video using H.264 features”, In Proc. Asian Conference on Computer Vision (**ACCV**), Xi’an, China, Sep. 2009.
- [83] **Boxin Shi**^{*}, Yangxi Li, and Chao Xu, “Intrinsic image decomposition using color invariant edge”, In Proc. International Conference on Image and Graphics (**ICIG**), Xi’an, China, Sep. 2009. (Oral)
- [84] Yangxi Li, **Boxin Shi**, and Chao Xu, “Integrating color constancy into multi-view video coding”, In Proc. International Conference on Image and Graphics (**ICIG**), Xi’an, China, Sep. 2009. (Oral)
- [85] **Boxin Shi**^{*}, Yangxi Li, Lin Liu, and Chao Xu, “Block-based color correction algorithm for multi-view video coding”, In Proc. IEEE International Conference on Multimedia & Expo (**ICME**), New York city, NY, USA, Jun. 2009. (Oral)
- [86] **Boxin Shi**^{*}, Lin Liu, and Chao Xu, “Comparison between JPEG2000 and H.264 for digital cinema”, In Proc. IEEE International Conference on Multimedia & Expo (**ICME**), Hannover, Germany, Jun. 2008.

Domestic Journal

- [1] Ruihua Zhang, **Boxin Shi**, Jinfa Yang, Hongying Zhao^{*}, and Zhengkang Zuo, “Polarimetric multi-view 3D reconstruction based on parallax angle and zenith angle optimization”, In Journal of Infrared and Millimeter Waves (**JIRMV**), Volume 40, Issue 1, Pages 133-142, 2021. (In Chinese)
- [2] Qian Zheng, **Boxin Shi**^{*}, and Gang Pan, “Summary study of data-driven photometric stereo methods”, In Virtual Reality & Intelligent Hardware (**VRIH**), Volume 2, Issue 3, Pages 213-221, 2020. (In English)

- [3] Jinfa Yang, Lei Yan, Hongying Zhao*, Rui Chen, Ruihua Zhang, and **Boxin Shi***, “Shape from polarization of low-texture objects with rough depth information”, In Journal of Infrared and Millimeter Waves (**JIRMV**), Volume 38, Issue 6, Pages 819-827, 2019. (In Chinese)

PATENTS

- [1] Achuta Kadambi, Vage Taamazyan, **Boxin Shi**, and Ramesh Raskar, “United States Patent 10557705: Methods and apparatus for enhancing depth maps with polarization cues”, Massachusetts Institute of Technology, Feb. 11, 2020.
- [2] Achuta Kadambi, Hang Zhao, **Boxin Shi**, Ayush Bhandari, and Ramesh Raskar, “United States Patent 9897699: Methods and apparatus for virtual sensor array”, Massachusetts Institute of Technology, Feb. 20, 2018.
- [3] Munehiko Sato, Ramesh Raskar, **Boxin Shi**, and Alex Olwal, “United States Patent 9482622: Methods and apparatus for surface classification”, Massachusetts Institute of Technology, Nov. 1, 2016.

RESEARCH
GRANTS

Young Scientist Grant

Principal Investigator, 2020–2021

Beijing Academy of Artificial Intelligence, BAAI2020ZJ0203, Granted: 500,000 CNY

VR Contents Generation and Design

Principal Investigator (Sub-project), 2019–2022

National Key Research and Development Project, 2019YFF0302902, Granted: 1,188,000 CNY

Photometric Methods in Computer Vision for Unconstrained Internet Photo Collections

Principal Investigator, 2019–2022

NSFC General Program, 61872012, Granted: 650,000 CNY

The Recruitment Program of Global Experts (Youth Program)

Principal Investigator, 2018–2020

Start-Up Funding, Granted: 3,000,000 CNY

Research on Events and Image Fusion Technology

Principal Investigator, 2020–2021

PKU-Huawei Joint Lab on Intelligent Media, Granted: 1,500,000 CNY

Research on Human Face Skin Modeling

Principal Investigator, 2020–2021

Huawei Japan Technologies K.K., Granted: 700,000 CNY

Data-driven and Polarimetric Reflection Removal

Principal Investigator, 2019–2020

PKU-Huawei Joint Lab on Intelligent Media, Granted: 1,000,000 CNY

Face Relighting under Natural Illumination and Realistic Reflectance

Principal Investigator, 2018–2019

PKU-Tencent Rhino-Bird Research Fund, Granted: 100,000 CNY

Radiometric Calibration for Photo Collections

Principal Investigator, 2017–2019

JSPS KAKENHI (Grant-in-Aid for Young Scientists B), JP17K12722, Granted: 3,250,000 JPY

Computational Photography

Co-Principal Investigator (PI: Prof. Xian-Hua Han), 2017–2018

Open Collaborative Research at National Institute of Informatics (NII), Granted: 700,000 JPY

Strategic Advancement of Multi-Purpose Ultra-Human Robot and Artificial Intelligence Technologies (SAMURAI)

Participant of 92 Researchers (no ranking), 2015–2017

New Energy and Industrial Tech. and Dev’t. Organization (NEDO), Granted: 2,063,675,120 JPY

PROFESSIONAL
ACTIVITIES

Associate Editor

International Journal of Computer Vision (IJCV), 2020–

IET Computer Vision, 2019–

Program Chair

ICCV Workshop Physics-based Vision meets Deep Learning (PBDL) 2019, 2017

Area Chair

International Conference on Computer Vision (ICCV) 2021

IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2021

IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 2021

International Conference on Pattern Recognition (ICPR) 2020

British Machine Vision Conference (BMVC) 2020, 2019

International Conference on 3D Vision (3DV) 2019

Asian Conference on Computer Vision (ACCV) 2018

IAPR International Conference on Machine Vision Applications (MVA) 2021, 2019, 2017

Tutorial Chair

International Conference on 3D Vision (3DV) 2020

Program Committee Member

IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2020, 2019, 2018, 2017, 2016, 2015, IEEE International Conference on Computer Vision (ICCV) 2019, 2017, 2015, European Conference on Computer Vision (ECCV) 2018, Neural Information Processing Systems (NeurIPS) 2020, International Conference on Machine Learning (ICML) 2021, International Conference on Learning Representations (ICLR) 2021, International Conference on Computational Photography (ICCP) 2021, 2020, 2018, 2017, AAAI Conference on Artificial Intelligence (AAAI) 2019, International Joint Conference on Artificial Intelligence (IJCAI) 2018, International Conference on Multimedia & Expo (ICME) 2019, Asian Conference on Computer Vision (ACCV) 2016, 2014, International Conference on 3D Vision (3DV) 2017, 2015, CAD/Graphics 2019, 2015

Journal Reviewer

IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI), International Journal of Computer Vision (IJCV), IEEE Transactions on Image Processing (TIP), IEEE Transactions on Visualization and Computer Graphics (TVCG), IEEE Transactions on Multimedia (TMM), IEEE Transactions on Circuits and Systems for Video Technology (TCSVT), IEEE Computer Graphics and Applications (CGA), IEEE Journal of Selected Topics in Signal Processing (JSTSP), ACM Transactions on Intelligent Systems and Technology (TIST), Computer Vision and Image Understanding (CVIU), Optical Express, Sensors, Image and Vision Computing (IVC), Machine Vision and Applications (MVA), Pattern Recognition Letters (PRL), The Visual Computer, SPIE Journal of Electronic Imaging (JEI), EURASIP Journal on Image and Video Processing (JIVP), Signal Processing: Image Communication (SPIC), IPSJ Transactions on Computer Vision and Applications (CVA)

TEACHING EXPERIENCE

Course Teaching

Instructor, Computational Photography, PKU	Mar. 2018 – present
Instructor, Algorithm Design and Analysis–Tutorial Class, PKU	Mar. 2018 – present
Instructor, Integrated Learning Programme–Computing, SUTD	Oct. 2014 – Nov. 2014
Guest lecturer, ISTD 50.572 Graphics & Visualization, SUTD	Sep. 2014 – Dec. 2014
Co-instructor, MAS.132/MAS.532 Mathematical Methods in Imaging, MIT	Feb. 2014 – May 2014

Postdoc Mentoring

Zhipeng Mo, SFU (with Prof. Ping Tan), Ph.D. from SUTD	Oct. 2019 – present
Renjie Wan, NTU (with Prof. Alex Kot), Ph.D. from NTU	Jan. 2019 – present
Qian Zheng, NTU (with Prof. Alex Kot), Ph.D. from ZJU	Feb. 2018 – present

Student Mentoring

Bohan Yu, Ph.D. candidate at PKU	Sep. 2021 – present
Minggui Teng, Ph.D. candidate at PKU	Sep. 2021 – present
Yi Ma, M. Sci. candidate at PKU	Sep. 2021 – present
Yuchen Hong, Ph.D. candidate at PKU	Sep. 2020 – present
Jiajun Tang, Ph.D. candidate at PKU	Sep. 2020 – present
Jianping Jiang, M. Sci. candidate at PKU	Sep. 2020 – present
Peiqi Duan, Ph.D. candidate at PKU	Sep. 2019 – present
Shuchen Weng, Ph.D. candidate at PKU	Sep. 2019 – present
Hao Wu, M. Eng. candidate at PKU	Sep. 2019 – present
Yongjie Zhu, M. Sci. candidate at BUPT	Sep. 2019 – present
Youwei Lyu, M. Sci. candidate at BUPT	Sep. 2019 – present
Chu Zhou, Ph.D. candidate at PKU (with Prof. Chao Xu)	Sep. 2019 – present
Jin Han, Master candidate at PKU (with Prof. Chao Xu)	Sep. 2018 – present

Bin He, Master candidate at PKU (with Prof. Ling-Yu Duan)	Sep. 2018 – present
Ce Wang, Ph.D. candidate at PKU (with Prof. Ling-Yu Duan)	Sep. 2017 – present
Jinfa Yang, Master candidate at PKU (with Prof. Lei Yan)	Sep. 2018 – Jul. 2020
Rui Chen, Ph. D. candidate at PKU (with Prof. Lei Yan)	Sep. 2017 – Jul. 2019
Daiqian Ma, Master candidate at PKU (with Prof. Ling-Yu Duan)	Sep. 2017 – Sep. 2019
Daniel Teo, Research assistant at SUTD (with Prof. Sai-Kit Yeung)	Jun. 2016 – Jul. 2018
Renjie Wan, Ph.D. candidate at NTU (with Prof. Alex C. Kot)	Oct. 2015 – Jan. 2019
Huijing Zhan, Ph.D. candidate at NTU (with Prof. Alex C. Kot)	Oct. 2015 – Mar. 2019
Zhipeng Mo, Ph.D. candidate at SUTD (with Prof. Sai-Kit Yeung)	Aug. 2014 – Jan. 2019
Hang Zhao, Ph.D. candidate at MIT (with Prof. Ramesh Raskar)	Jan. 2014 – Mar. 2016

INVITED
TALKS

20201215, VISVA Winter School 2020, Singapore
 20191205, Shintsukan Symposium 2019, Kyoto, Japan
 20191119, SIGGRAPH Asia 2019 Course, Brisbane, Australia
 20190922, ICIP 2019 Tutorial, Taipei, China
 20190918, JSAP-OSA Joint Symposia 2019, Sapporo, Japan

LANGUAGE
SKILLS

Mandarin Chinese: Native speaker
 English: Fluent
 Japanese: JLPT (Japanese Language Proficiency Test) – Level N1 (highest level)

Last updated: Mar. 29, 2021