

# Guanying Chen

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Github: <https://github.com/guanyingc>

## EDUCATION

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**The University of Hong Kong (HKU)**, Hong Kong SAR, China Sep. 2016 – Jan. 2021

**Ph.D. Computer Science**

- Supervisor: Prof. Kenneth K. Y. Wong
- PhD Dissertation: Single-view Analysis of Non-Lambertian Objects based on Deep Learning

**Sun Yat-sen University (SYSU)**, Guangzhou, China Sep. 2012 – Jun. 2016

**B.Eng. Automation**

- GPA: 92/100
- Outstanding Graduate

## WORKING/RESEARCH EXPERIENCE

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- Research Assistant Professor at The Chinese University of Hong Kong (Shenzhen) Oct 2021 - Present
- Senior Research Developer at Baidu VIS Department Feb 2021 - Sep 2021
- Research Intern at Alibaba DAMO Academy, working with Prof. Lei Zhang Dec 2019 - Nov 2020
- Research Intern at Osaka University, working with Prof. Yasuyuki Matsushita and Prof. Boxin Shi Jun 2019 - Nov 2019
- Research Intern at SenseTime Jun 2016 - Aug 2016

## PUBLICATIONS (GOOGLE SCHOLAR)

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**Conferences:** CVPR (8), ICCV (2), ECCV (4), NeurIPS (1) — Orals x3, Highlight/Spotlights x2

**Journals:** TPAMI (1), IJCV (1), TIP (1)

(# corresponding author, \* equal contribution)

- [1] [CVPR 2024] *Aerial Lifting: Neural Urban Semantic and Building Instance Lifting from Aerial Imagery*, IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), Seattle, WA, USA, 2024.  
Yuqi Zhang, [Guanying Chen](#)<sup>#</sup>, Jiaxin Chen, Shuguang Cui.
- [2] [CVPR 2024] *RichDreamer: A Generalizable Normal-Depth Diffusion Model for Detail Richness in Text-to-3D*, IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), Seattle, WA, USA, 2024 (**Highlight**).  
Lingteng Qiu\*, [Guanying Chen](#)\*, Xiaodong Gu\*, Qi Zuo, Mutian Xu, Yushuang Wu, Weihao Yuan, Zilong Dong, Liefeng Bo, Xiaoguang Han
- [3] [CVPR 2023] *REC-MV: REconstructing 3D Dynamic Cloth from Monocular Videos*. IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), Vancouver, Canada, 2023  
Lingteng Qiu\*, [Guanying Chen](#)\*, Jiapeng Zhou, Mutian Xu, Junle Wang, Xiaoguang Han.
- [4] [TPAMI 2022] *Deep Photometric Stereo for Non-Lambertian Surfaces*, IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI), 44(1):129-142, January 2022.  
[Guanying Chen](#), Kai Han, Boxin Shi, Yasuyuki Matsushita, Kwan-Yee K. Wong.
- [5] [NeurIPS 2022] *S<sup>3</sup>-NeRF: Neural Reflectance Field from Shading and Shadow under a Single Viewpoint*, Conference on Neural Information Processing Systems (NeurIPS), New Orleans, Louisiana, USA, 2022.  
Wenqi Yang, [Guanying Chen](#)<sup>#</sup>, Chaofeng Chen, Zhenfang Chen, Kwan-Yee K. Wong.
- [6] [ECCV 2022] *PS-NeRF: Neural Inverse Rendering for Multi-view Photometric Stereo*, European Conference on Computer Vision (ECCV), Tel Aviv, 2022.  
Wenqi Yang, [Guanying Chen](#)<sup>#</sup>, Chaofeng Chen, Zhenfang Chen, Kwan-Yee K. Wong.
- [7] [ACCV 2022] *Neural Deformable Voxel Grid for Fast Optimization of Dynamic View Synthesis*, Asia Conference on Computer Vision (ACCV), Macau, 2022. (**Oral Presentation**)  
Xiang Guo\*, [Guanying Chen](#)\*, Yuchao Dai, Xiaoqing Ye, Jiadai Sun, Xiao Tan, Errui Ding.
- [8] [ICCV 2021] *HDR Video Reconstruction: A Coarse-to-fine Network and A Real-world Benchmark Dataset*, International Conference on Computer Vision (ICCV), Virtual Conference, 2021.  
[Guanying Chen](#), Chaofeng Chen, Shi Guo, Zhetong Liang, Kwan-Yee K. Wong, Lei Zhang.

- [9] [ECCV 2020] *What is Learned in Deep Uncalibrated Photometric Stereo?*, European Conference on Computer Vision (ECCV), Virtual Conference, 2020.  
Guanying Chen, Michael Waechter, Boxin Shi, Kwan-Yee K. Wong, Yasuyuki Matsushita.
- [10] [IJCV 2019] *Learning Transparent Object Matting*, International Journal of Computer Vision (IJCV), 127(10): 1527-1544, August 2019.  
Guanying Chen\*, Kai Han\*, Kwan-Yee K. Wong.
- [11] [CVPR 2019] *Self-calibrating Deep Photometric Stereo Networks*, IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), Long Beach, CA, USA, 2019 (**Oral Presentation**).  
Guanying Chen, Kai Han, Boxin Shi, Yasuyuki Matsushita, Kwan-Yee K. Wong.
- [12] [ECCV 2018] *PS-FCN: A Flexible Learning Framework for Photometric Stereo*, European Conference on Computer Vision (ECCV), Munich, Germany, 2018.  
Guanying Chen, Kai Han, Kwan-Yee K. Wong.
- [13] [CVPR 2018] *TOM-Net: Learning Transparent Object Matting from a Single Image*, IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), Salt Lake City, UT, USA, 2018 (**Spotlight Presentation**).  
Guanying Chen\*, Kai Han\*, Kwan-Yee K. Wong.
- [14] [ICCV 2023] *Forward Flow for Novel View Synthesis of Dynamic Scenes*, International Conference on Computer Vision (ICCV), Paris, France, 2023. (**Oral Presentation**)  
Xiang Guo, Jiadai Sun, Yuchao Dai, Guanying Chen, Xiaoqing Ye, Xiao Tan, Errui Ding, Jingdong Wang.
- [15] [TIP 2023] *Deep Face Video Inpainting via UV Mapping*, IEEE Transactions on Image Processing (TIP), 32:1145-1157, February 2023.  
Wenqi Yang, Zhenfang Chen, Chaofeng Chen, Guanying Chen, Kwan-Yee K. Wong.
- [16] [CVPR 2023] *MVImgNet: A Large-scale Dataset of Multi-view Images*, IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), Vancouver, Canada, 2023.  
Xianggang Yu, Mutian Xu, Yidan Zhang, Haolin Liu, Chongjie Ye, Yushuang Wu, Zizheng Yan, Chenming Zhu, Zhangyang Xiong, Tianyou Liang, Guanying Chen, Shuguang Cui, Xiaoguang Han.
- [17] [IJCAI 2023] *Non-Lambertian Multispectral Photometric Stereo via Spectral Reflectance Decomposition*, International Joint Conference on Artificial Intelligence (IJCAI), Macau, SAR, 2023.  
Jipeng Lv, Heng Guo, Guanying Chen, Jinxiu Liang, Boxin Shi.
- [18] [ECCV 2022] *Towards High-Fidelity Single-view Holistic Reconstruction of Indoor Scene*, European Conference on Computer Vision (ECCV), Tel Aviv, 2022.  
Haolin Liu, Yujian Zheng, Guanying Chen, Shuguang Cui, Xiaoguang Han.
- [19] [CVPR 2022] *JIFF: Jointly-aligned Implicit Face Function for High Fidelity Single View Clothed Human Reconstruction*, IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), New Orleans, Louisiana, USA, 2022. (**Oral Presentation**)  
Yukang Cao, Guanying Chen, Kai Han, Wenqi Yang, Kwan-Yee K. Wong.
- [20] [CVPR 2022] *ETHSeg: An Amodel Instance Segmentation Network and a Real-world Dataset for X-Ray Waste Inspection*, IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), New Orleans, Louisiana, USA, 2022.  
Lingteng Qiu, Zhangyang Xiong, Xuhao Wang, Kenkun Liu, Yihan Li, Guanying Chen, Xiaoguang Han, Shuguang Cui.

## RESEARCH GRANTS

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- PI, National Natural Science Foundation of China (NSFC), Young Scientists Fund, 300,000 CNY (2023-2025)
- PI, Shenzhen Science and Technology Program, Young Scientists Fund, 300,000 CNY (2023-2024)

## PROFESSIONAL SERVICES

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- Area Chair: NeurIPS 2024
- Conference Reviewer: CVPR, ICCV, ECCV, NeurIPS, ICML, ICLR
- Journal Reviewer: TPAMI, IJCV, TVCG, TMM, RAL, PR, C&G, GMOD, IMAVIS, RCIM
- Member of the CSIG-3DV Special Committee
- Member of Vision And Learning Seminar (Valse) Executive Area Chair Committee
- Member of Graphics And Mixed Environment Symposium (GAMES) Executive Committee

## TEACHING EXPERIENCE

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- Teaching Assistant at Department of Computer Science, HKU
  - COMP7404 Computational Intelligence and Machine Learning

Fall, 2016 – 2017

## SKILLS

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- Programming Language: Python, C/C++, Matlab, Lua, Shell, C#
- Programming Environment: Linux + Vim + Tmux + Git + Makefile + Pdb/Gdb + SSH
- Tools: PyTorch, Torch7, Caffe, Tensorflow, Mitsuba, POV-Ray, OpenCV, Libsvm, Meshlab,  $\LaTeX$ , etc

## HONORS AND AWARDS

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- Top Reviewers in NeurIPS 2023 NeurIPS (2023)
- CCF Excellent Graphics Open Source Dataset (MImgNet) CCF CAD&CD (2023)
- Global Top 100 Chinese Rising Stars in Artificial Intelligence Baidu Scholar (2021)
- M. Braun Postgraduate Prizes HKU (2018-2019)
- Hong Kong and China Gas Company Limited Postgraduate Prize HKU (2018-2019)
- University Postgraduate Fellowship (UPF) HKU (2016-2020)
- Outstanding Graduate SYSU (2016)