Zhiqiang Yan

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homepage

EDUCATION EXPERIENCE

2020.09 – 2024.06: Nanjing University of Science and Technology (Nanjing, China)
Ph.D. of Computing (Supervisor: Prof. **Jian Yang** and Prof. **Jun Li**)

2014.09 – 2018.06: Nanjing University of Science and Technology (Nanjing, China)
B.S. of Automation

RESEARCH INTEREST

My research interests lie in computer vision and machine learning, with a focus on depth-related tasks: depth completion, depth estimation, and depth super-resolution. These tasks are essential for 3D reconstruction, scene understanding and autonomous driving.

FULL PUBLICATION LIST

Accepted Papers:

1. **Zhiqiang Yan**, Yuankai Lin, Kun Wang, Yupeng Zheng, Yufei Wang, Zhenyu Zhang, Jun Li, and Jian Yang. Tri-Perspective View Decomposition for Geometry-Aware Depth Completion. In **CVPR 24 , [rank 1st on KITTI leaderboard at submission], [new dataset], [TOF system on smartphones], Oral**

2. **Zhiqiang Yan**, Xiang Li, Kun Wang, Shuo Chen, Jun Li, and Jian Yang. Distortion and Uncertainty Aware Loss for Panoramic Depth Completion. In **ICML 23, [new SOTA]**

3. **Zhiqiang Yan**, Kun Wang, Xiang Li, Zhenyu Zhang, Jun Li, and Jian Yang. DesNet: Decomposed Scale-Consistent Network for Unsupervised Depth Completion. In **AAAI 23, [rank 1st on KITTI leaderboard (unsupervised) at submission], Oral**

4. **Zhiqiang Yan**, Kun Wang, Xiang Li, Zhenyu Zhang, Jun Li, and Jian Yang. RigNet: Repetitive Image Guided Network for Depth Completion. In **ECCV 22, [rank 1st on KITTI leaderboard at submission]**

5. **Zhiqiang Yan**, Xiang Li, Kun Wang, Zhenyu Zhang, Jun Li, and Jian Yang. Multi-Modal Masked Pre-Training for Monocular Panoramic Depth Completion. In **ECCV 22, [new task]**

6. **Zhiqiang Yan**, Kun Wang, Xiang Li, Zhenyu Zhang, Guangyu Li, Jun Li, and Jian Yang. Learning Complementary Correlations for Depth Super-Resolution with Incomplete Data in Real World. In **TNNLS 22, [new task]**

7. **Zhiqiang Yan**, Yupeng Zheng, Deng-ping Fan, Xiang Li, Jun Li, and Jian Yang. Learnable Differencing Center for Nighttime Depth Perception. In **Visual Intelligence 24, [new task]**

8. Zhengxue Wang, **Zhiqiang Yan**, and Jian Yang. SGNet: Structure Guided Network via Gradient-Frequency Awareness for Depth Map Super-Resolution. In *AAAI 24*, [new SOTA on all datasets], *Corresponding Author*

9. Kun Wang, **Zhiqiang Yan**, Huang Tian, Zhenyu Zhang, Xiang Li, Jun Li, and Jian Yang. AltNeRF: Learning Robust Neural Radiance Field via Alternating Depth-Pose Optimization. In *AAAI 24*.

10. Kun Wang, Zhenyu Zhang, **Zhiqiang Yan**, Xiang Li, Baobei Xu, Jun Li, and Jian Yang. Regularizing Nighttime Weirdness: Efficient Self-Supervised Monocular Depth Estimation in the Dark. In *ICCV 21*, [new task]

Submitted Papers:

1. Zhengxue Wang*, **Zhiqiang Yan***, Ming-Hsuan Yang, Jinshan Pan, Jian Yang, Ying Tai, and Guangwei Gao. Scene Prior Filtering for Depth Map Super-Resolution. To *NIPS 24*, [new SOTA], [large vision model priors], *Corresponding Author*

2. **Zhiqiang Yan**, Xiang Li, Le Hui, Zhenyu Zhang, Jun Li, and Jian Yang. RigNet++: Semantic Assisted Repetitive Image Guided Network for Depth Completion. To *IJCV 24*, [new SOTA]

3. **Zhiqiang Yan**, Zhijie Shen, Xiang Li, Zhenyu Zhang, Jun Li, and Jian Yang. PanoKernel: Large Distortion-aware Kernel for Panoramic Depth Perception. To *IEEE Transactions on Intelligent Vehicles 24*, [new backbone]

CONFERENCE REVIEWER

IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**)
Conference on Neural Information Processing Systems (**NIPS**)
International Conference on Computer Vision (**ICCV**)
European Conference on Computer Vision (**ECCV**)
AAAI Conference on Artificial Intelligence (**AAAI**)
Asian Conference on Computer Vision (**ACCV**)
International Conference on 3D Vision (**3DV**)

AWARDS

2022.10: Hua Wei Scholarship (**Top 1%**)
2023.10: National Scholarship (**Top 2%**)

REFERENCE

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Prof. **Jun Li**, PCA Lab, Nanjing University of Science and Technology. Email: junli@njust.edu.cn, Homepage: https://sites.google.com/view/junlineu/