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 such as depth completion, depth estimation, and depth super-resolution, as well as 3D occupancy prediction. 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. 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]**

9. 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***

10. 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**.

11. Jiangwei Weng, **Zhiqiang Yan**, Ying Tai, Jianjun Qian, Jian Yang, and Jun Li. MambaLLIE: Implicit Retinex-Aware Low Light Enhancement with Global-then-Local State Space. In ***NIPS 24***

12. Kun Wang, **Zhiqiang Yan**, Junkai Fan, Wanlu Zhu, Xiang Li, Jun Li, and Jian Yang. DCDepth: Progressive Monocular Depth Estimation in Discrete Cosine Domain. In ***NIPS 24***

Submitted Papers:

1. **Zhiqiang Yan**, Kun Wang, Xiang Li, Guangwei Gao, Jun Li, and Jian Yang. Tri-Perspective View Decomposition for Geometry Aware Depth Completion and Super-Resolution. To ***PAMI 24*, [new SOTA]**

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 ***TITS 24*, [new backbone]**

4. Zhengxue Wang*, **Zhiqiang Yan***, Jinshan Pan, Guangwei Gao, Kai Zhang, and Jian Yang. Degradation Oriented and Regularized Network for Real-World Depth Super-Resolution. To ***CVPR 25*, [The first degradation model for DSR], *Corresponding Author***

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

6. Yuan Wu*, **Zhiqiang Yan***, Zhengxue Wang, Xiang Li, Le Hui, and Jian Yang. Deep Height Decoupling for Precise Vision-based 3D Occupancy Prediction. To ***ICRA 25*, [new SOTA], *Corresponding Author***

REVIEWER

CVPR、ICCV、ECCV、NIPS、ICLR、AAAI、3DV、ICRA
TIP、TCSVT、TIV

AWARDS

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

REFERENCE

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