

H3D-Net: Few-Shot High-Fidelity 3D Head Reconstruction

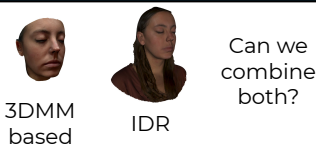
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github.com/CrisalixSA/h3d-net

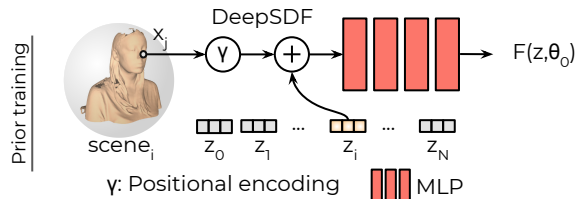
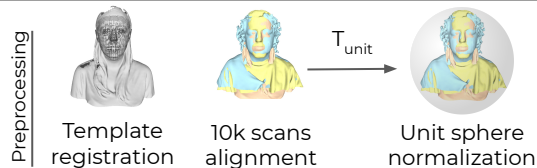


Introduction

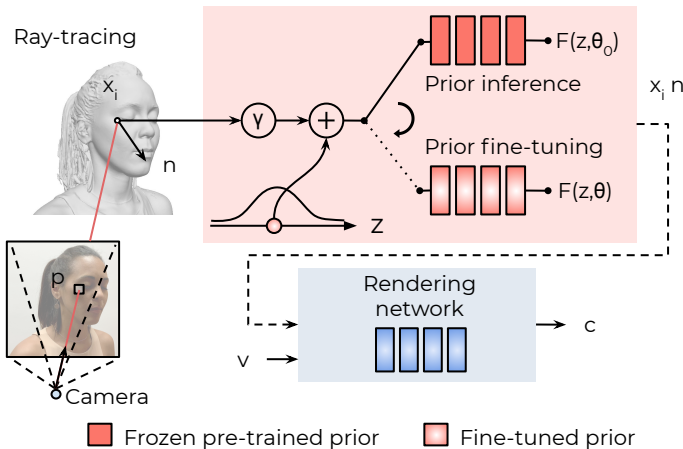


	3DMM based	IDR	
Few-shot	✓	✗	✓
Robustness	✓	✗	✓
Accuracy	✗	✓	✓
Continuous repr.	✗	✓	✓

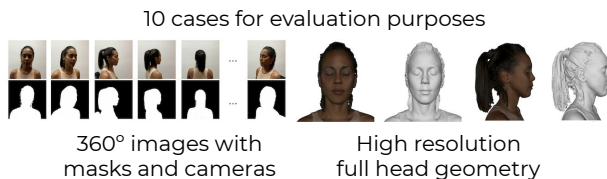
Learning a shape prior for heads



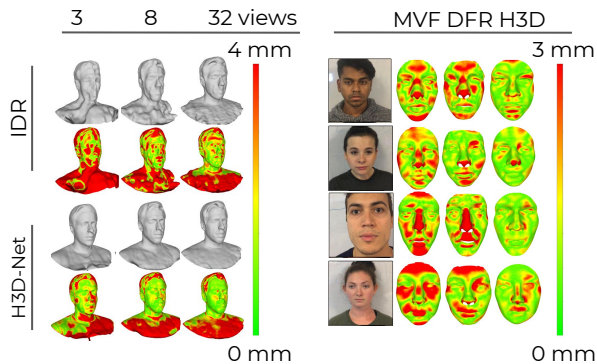
H3D-Net



H3DS Dataset



Results



	3 views	8 views	32 views
MVF-Net	1.6 / -	-	-
DFRNMVS	1.8 / -	-	-
IDR	3.5 / 17.0	1.9 / 8.7	1.3 / 5.8
H3D-Net	1.4 / 12.7	1.3 / 5.4	1.2 / 4.9

Face / Head chamfer distance in mm on H3DS

References

- [1] DeepSDF: Park et al. - CVPR 2019
- [2] MVF-Net: Wu et al. - CVPR 2019
- [3] IDR: Yariv et al. - NeurIPS 2020
- [4] DFRNMVS: Bai et al. - CVPR 2020