

Supplementary Materials for “Endo-4DGS: Endoscopic Monocular Scene Reconstruction with 4D Gaussian Splatting”

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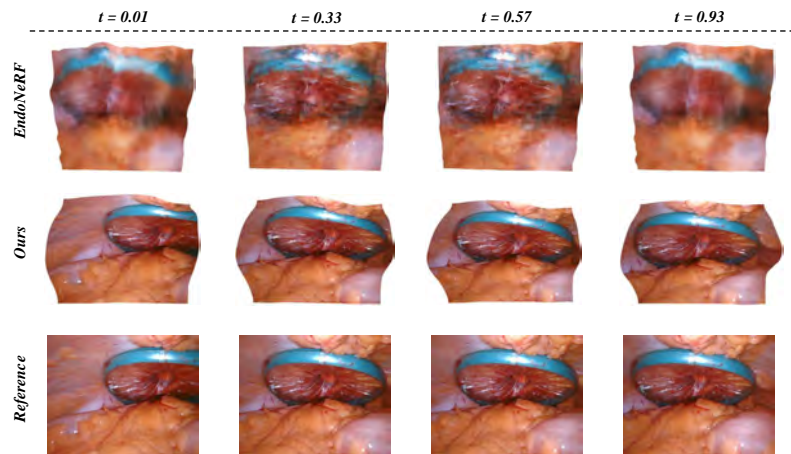


Fig. 1. Qualitative comparison on the StereoMIS dataset [1] against EndoNeRF [2].

Table 1. Ablation experiments of the proposed method on EndoNeRF Dataset [2]. We compare the performance by removing the depth initialization.

Models	EndoNeRF-Cutting			EndoNeRF-Pulling		
	PSNR \uparrow	SSIM \uparrow	LPIPS \downarrow	PSNR \uparrow	SSIM \uparrow	LPIPS \downarrow
Without depth initialization	5.62	0.606	0.528	7.08	0.728	0.416
With depth initialization	36.56	0.955	0.032	37.85	0.959	0.043

References

- Hayoz, M., Hahne, C., Gallardo, M., Candinas, D., Kurmann, T., Allan, M., Sznitman, R.: Learning how to robustly estimate camera pose in endoscopic videos. International Journal of Computer Assisted Radiology and Surgery pp. 1185–1192 (2023)

2. Wang, Y., Long, Y., Fan, S.H., Dou, Q.: Neural rendering for stereo 3d reconstruction of deformable tissues in robotic surgery. In: International Conference on Medical Image Computing and Computer-Assisted Intervention. pp. 431–441. Springer (2022)