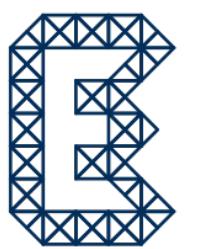


# MorpheuS: Neural Dynamic 360° Surface Reconstruction from Monocular RGB-D Video



Engineering and  
Physical Sciences  
Research Council

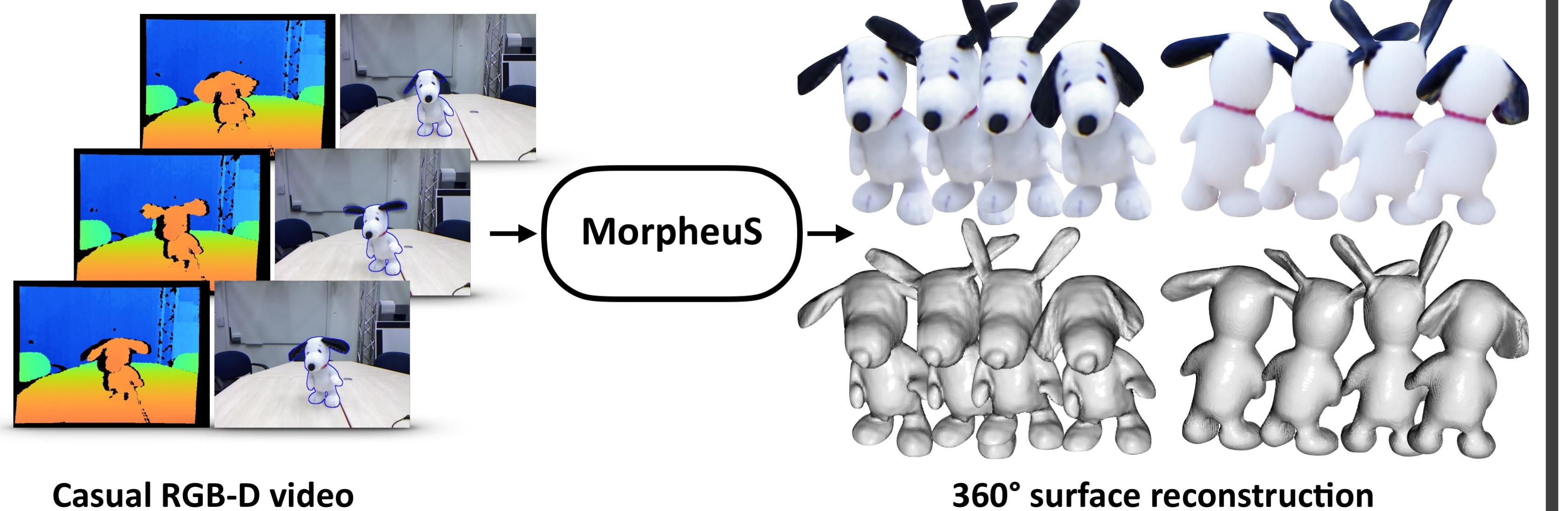
Hengyi Wang Jingwen Wang Lourdes Agapito  
**University College London**



**CVPR**  
SEATTLE, WA JUNE 17-21, 2024

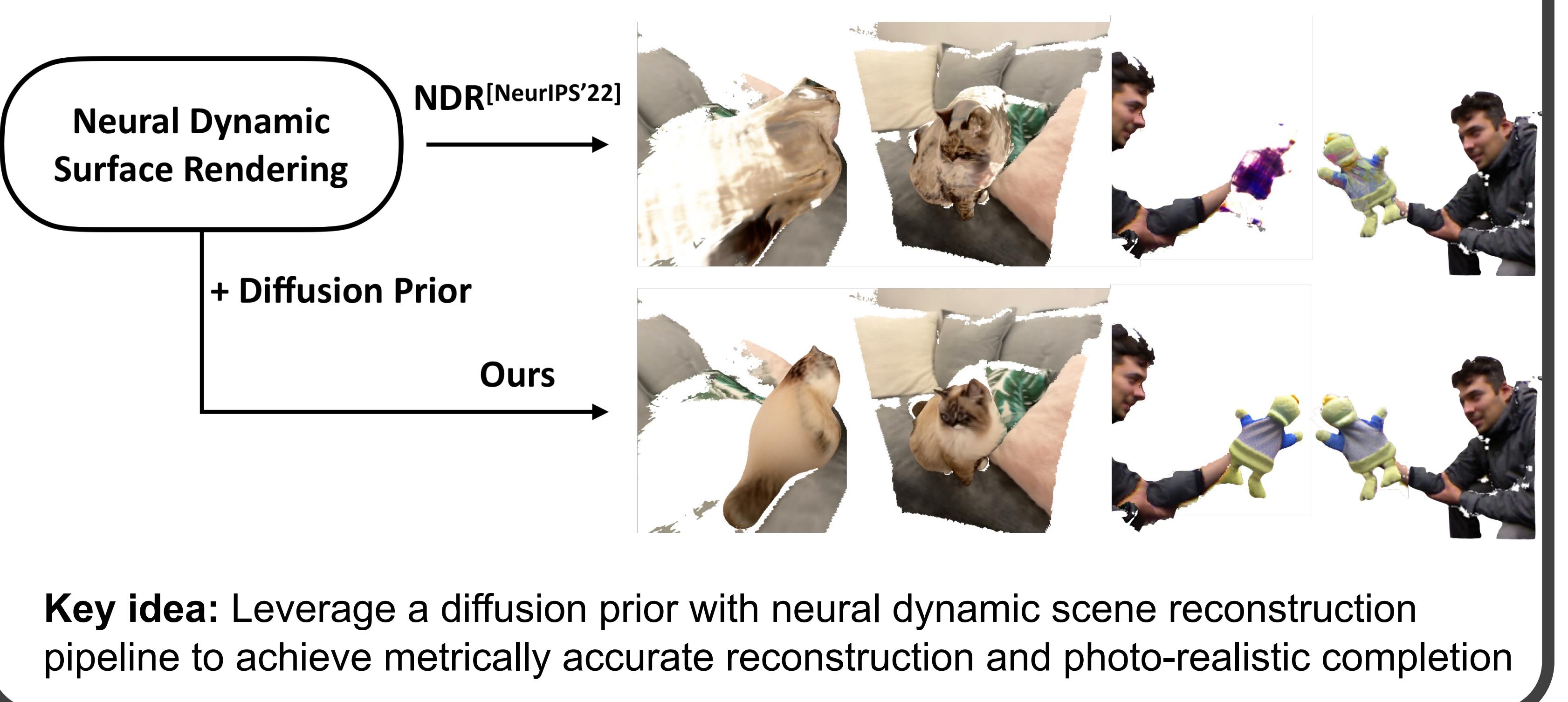
Paper, code, and additional results can be found at  
<https://hengyiwang.github.io/projects/morpheus>

## 1. Introduction

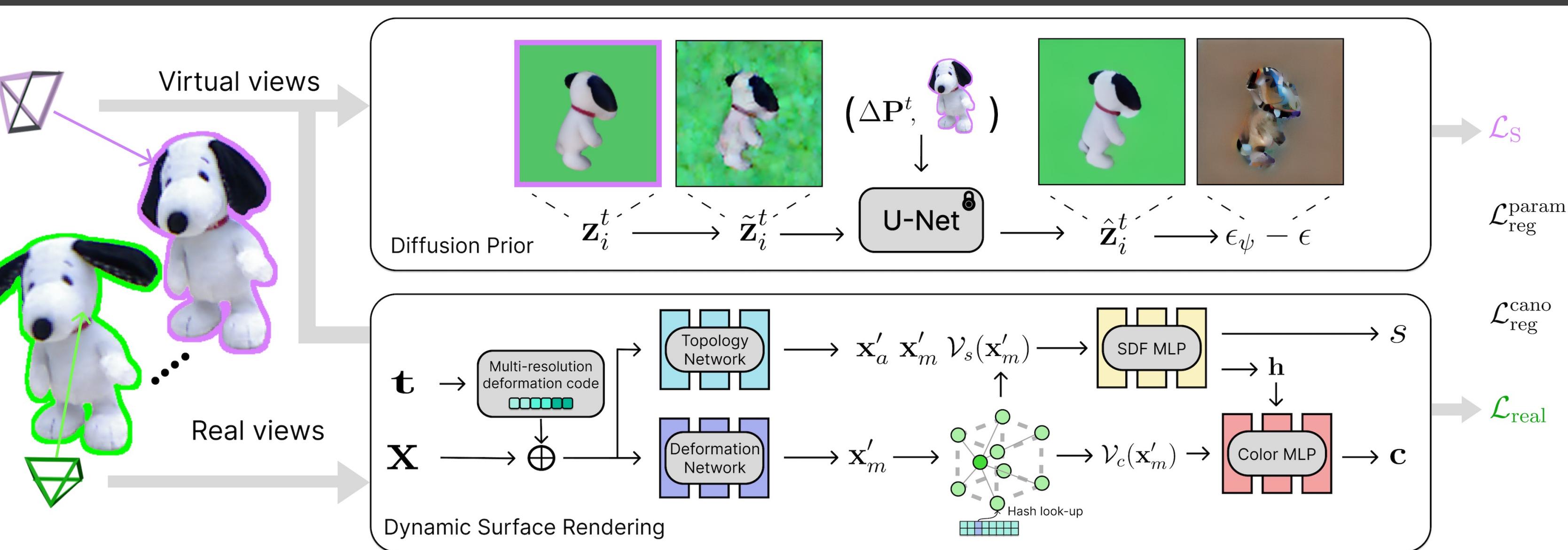


**Goal:** Dynamic 360° surface reconstruction from monocular RGB-D video

## 2. Key idea

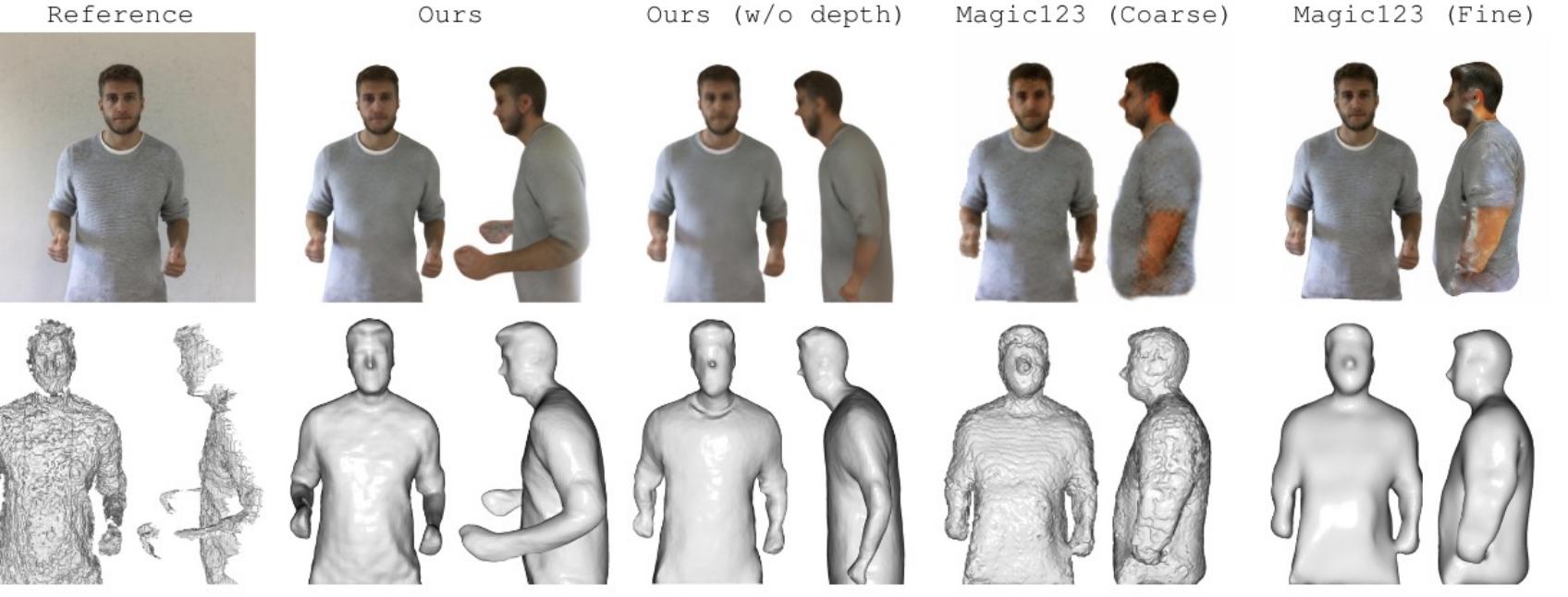


## 3. Pipeline



## 5. Ablation

	Acc. [cm]↓	Comp. [cm]↓	Clip sim. ↑
w/o diffusion prior	0.99	<b>0.73</b>	82.68
w/o temporal condition	0.92	0.95	86.01
w/o angle weight	0.91	0.86	86.65
w/o depth	3.24	4.90	85.35
w/o canonical space	0.90	1.05	86.14
Full model	<b>0.88</b>	0.78	<b>86.77</b>



## 4. Qualitative results

