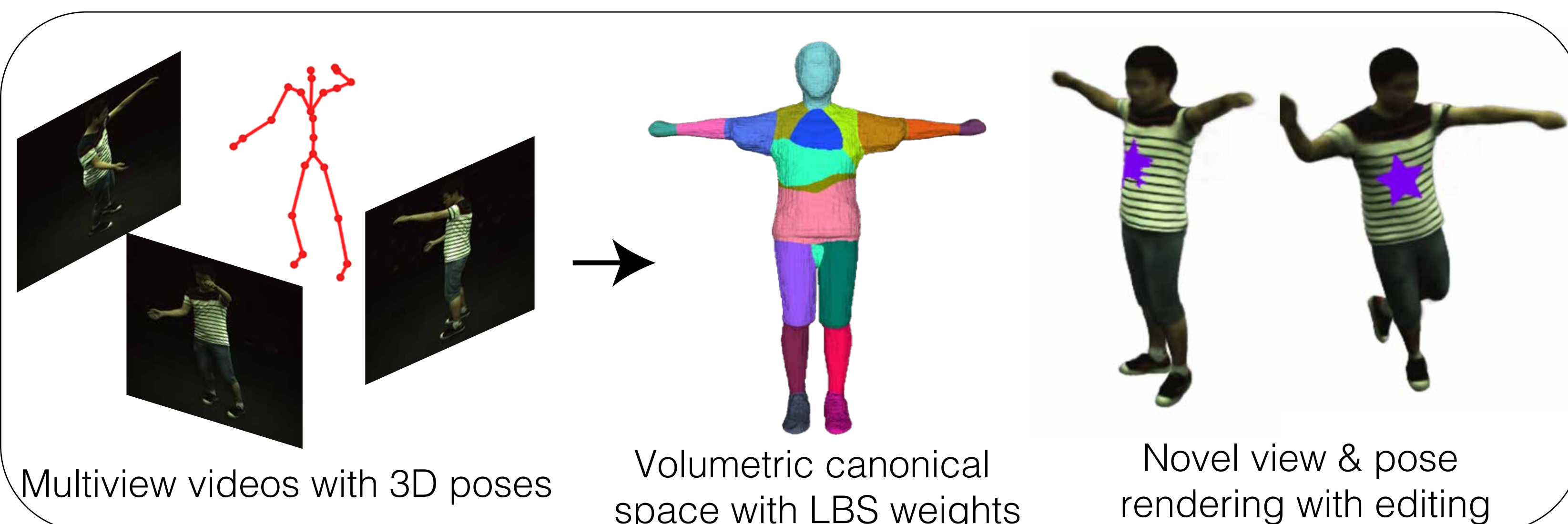


TAVA: Template-free Animatable Volumetric Actors

Ruilong Li^{1,3} Julian Tanke^{2,3} Minh Vo³ Michael Zollhofer³ Jurgen Gall² Angjoo Kanazawa¹ Christoph Lassner³
¹UC Berkeley ²University of Bonn ³Meta Reality Labs Research

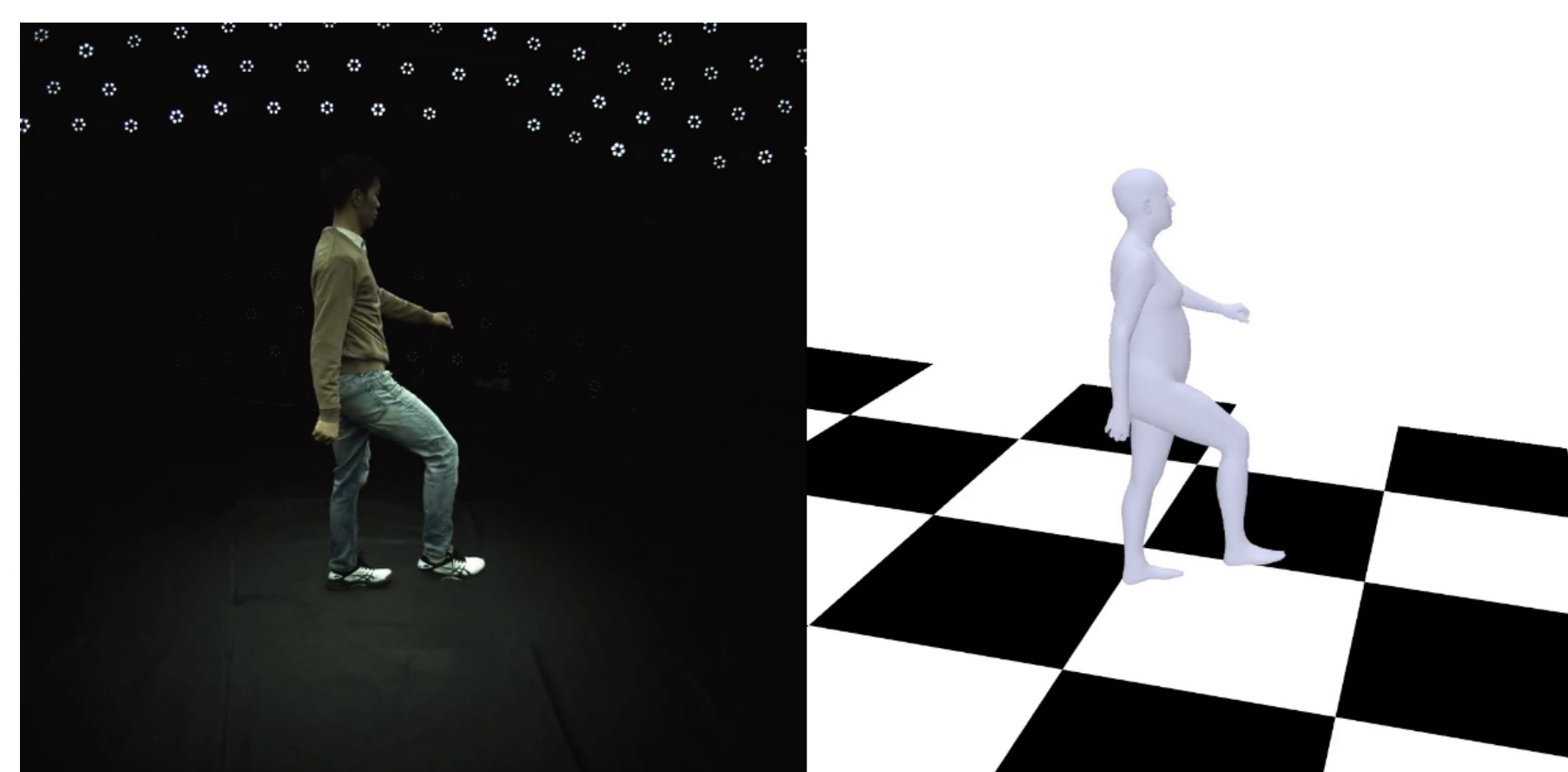
Problem



Previous Approaches

1. Rely on body template such as SMPL

Not generalizable to other creatures beyond human



e.g. Peng et al. CVPR 21, ICCV21, Liu et al. TOG21

2. Formulate deformation as pose-conditioned inverse warping

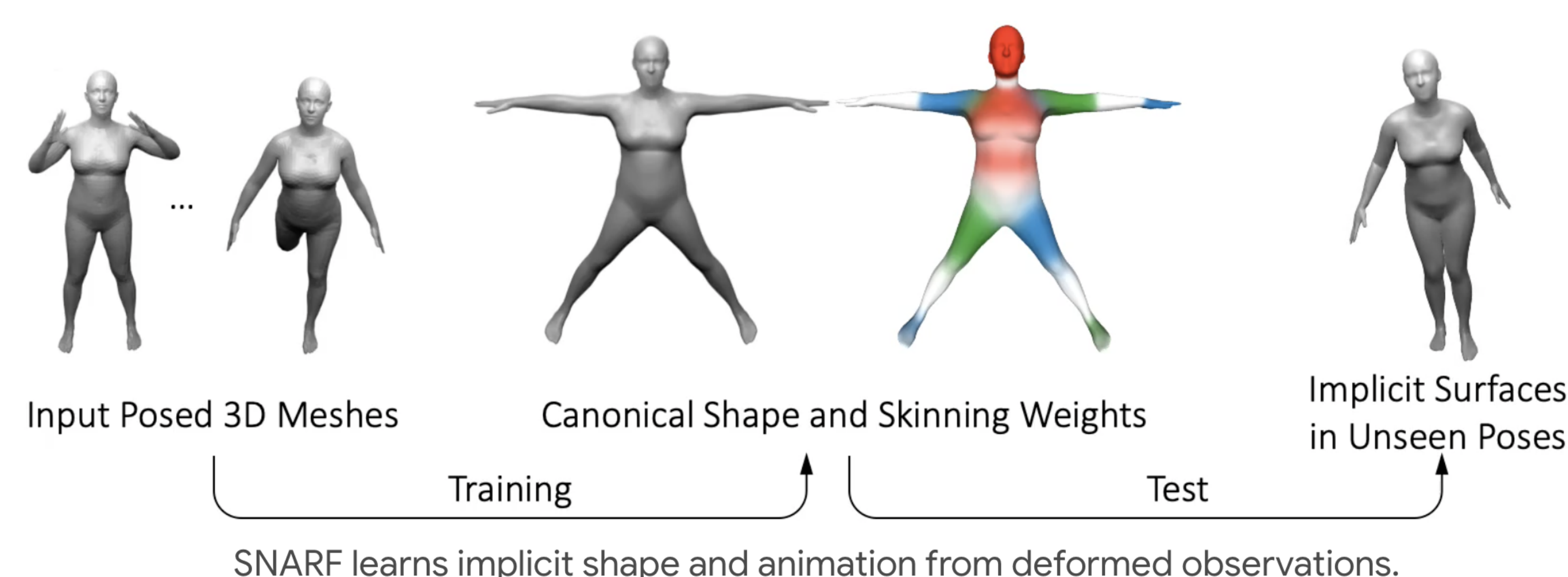
$$(x_v, P) \xrightarrow{\text{MLP}_\Theta} x_c$$

Not generalizable to novel poses

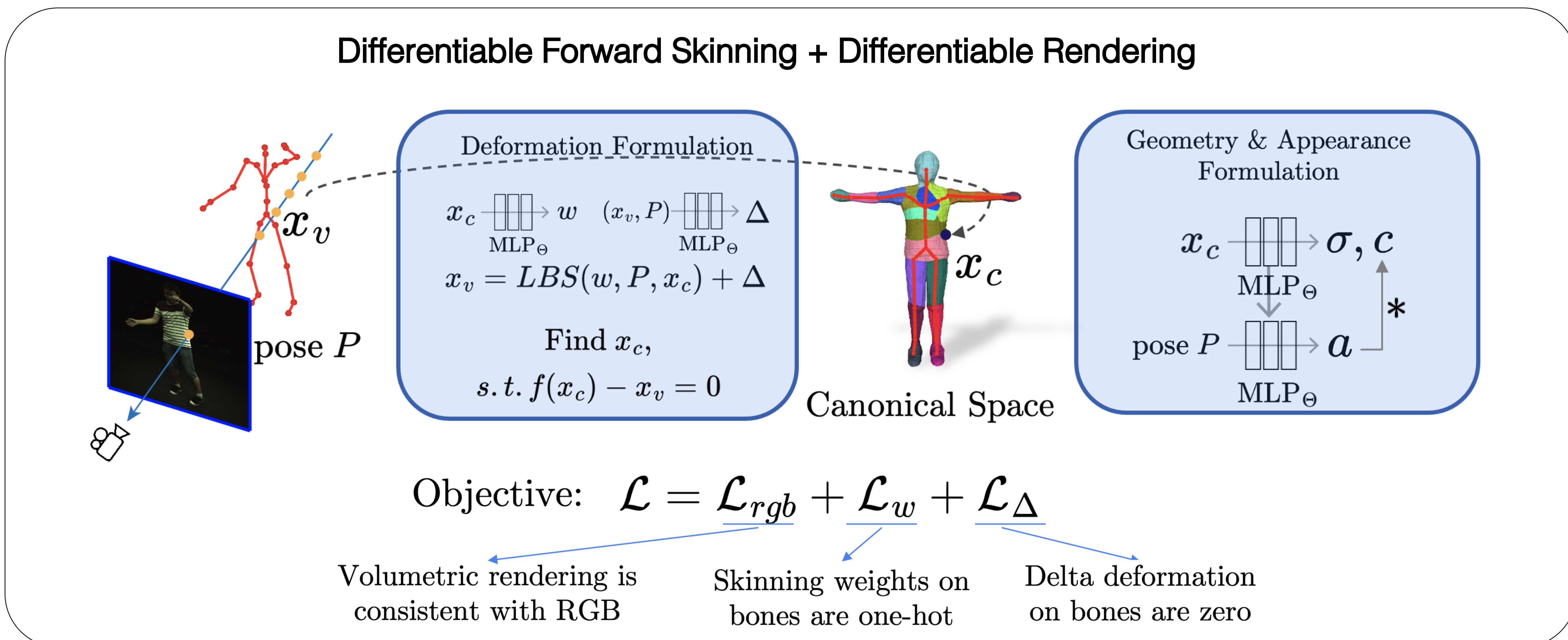
e.g. Peng et al. ICCV21, Noguchi et al. ICCV22, Su et al. NeurIPS21

Nugget

SNARF: Differentiable Forward Skinning (Chen et al. ICCV21)



Our Approach



Results

