ReMu: Capture and Reconstruct 3D Clothed Human from Images

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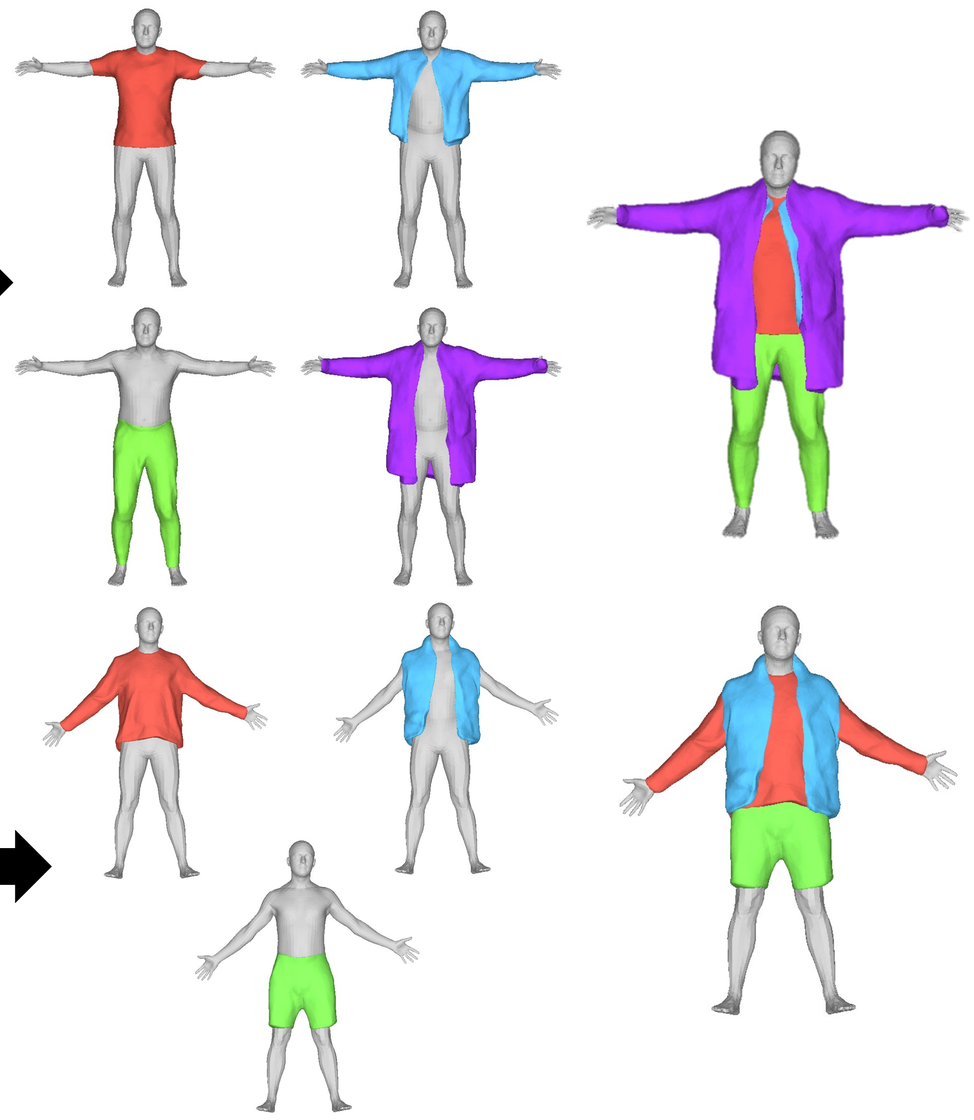
Problem Setup

Input:

Captured Image Layers

Output:



Single Image

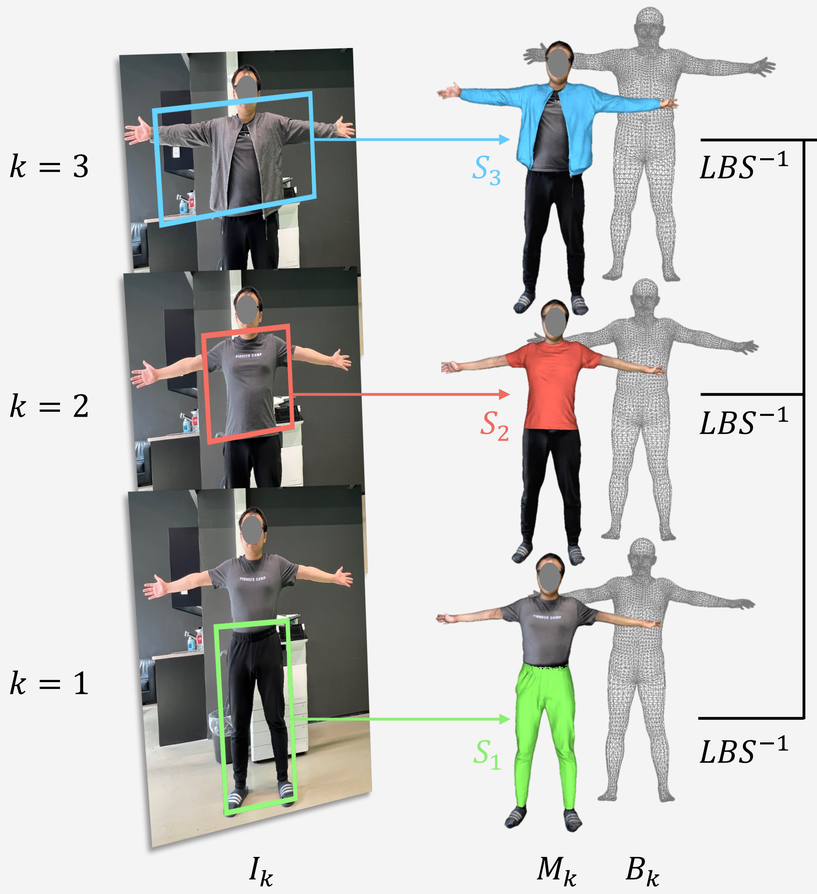
Inpainting ControlNet

Inpainted Layers

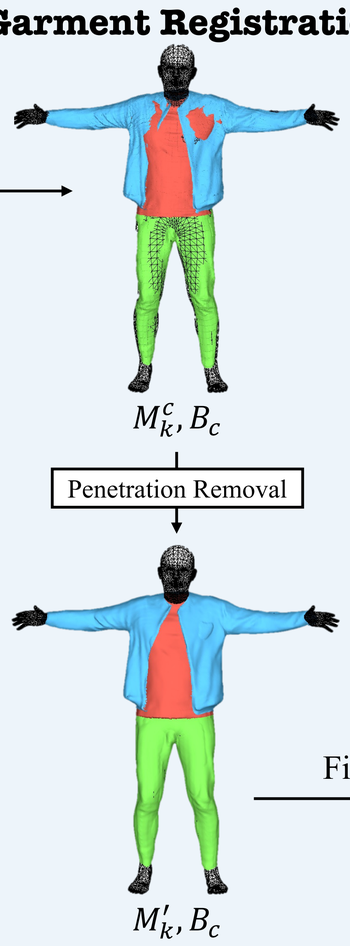
Simulation-ready Garments

Method

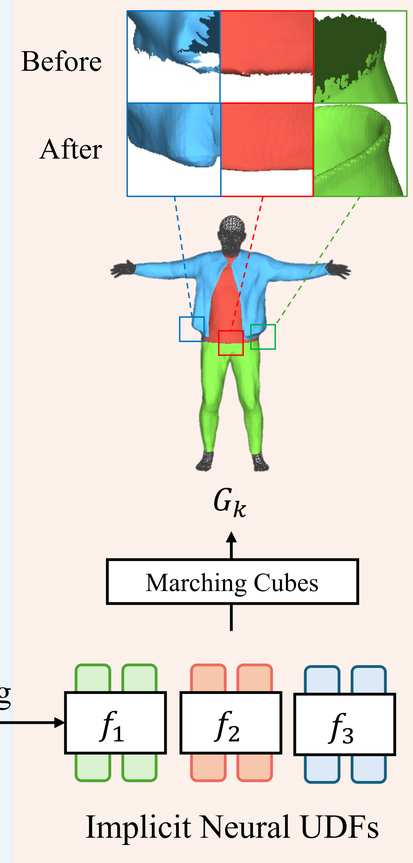
Body Fitting & Clothing Reconstruction



Garment Registration



Garment Refinement



Clothing Reconstruction

- Off-the-shelf human fitting & reconstruction model (SiTH)
- Multi-view segmentation using Grounded SAM model

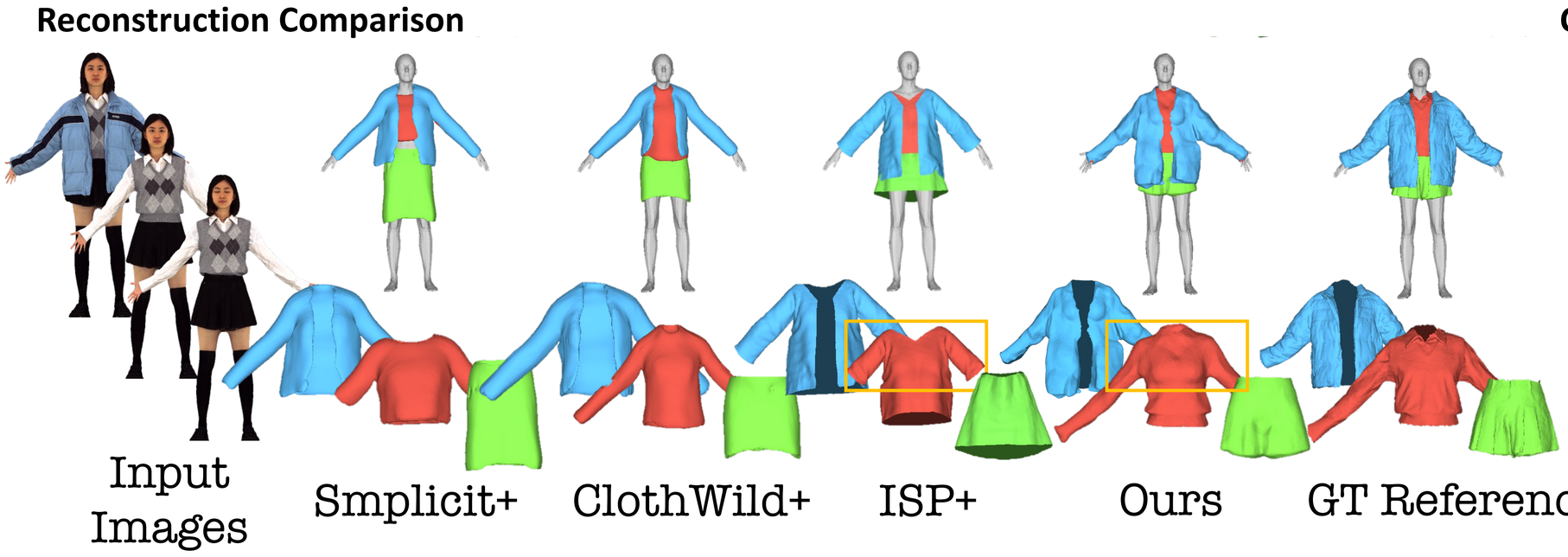
Garment Registration

- Deform garments back to the canonical pose.
- Remove penetration from inner to outer layers.

Garment Refinement

- Fitting implicit neural UDF to each garment layer.
- Extract meshes from the UDF.

Reconstruction Comparison



Clothing Simulation