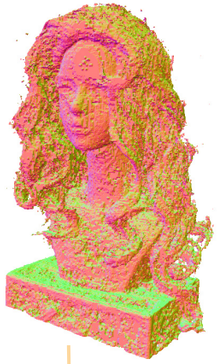
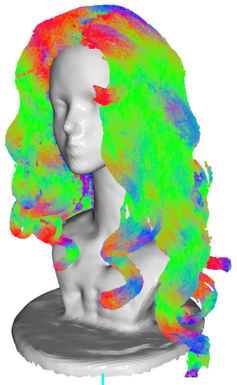
Input

Depth map

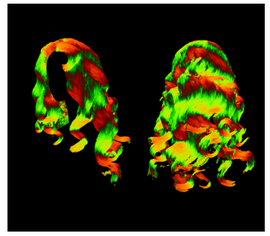
P_{raw}



P_{out}

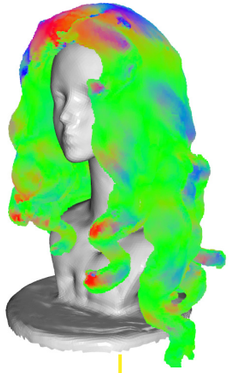


Undirectional strand maps



Rendered depth maps

P_{in}



Strand model

Output

Monocular video preprocessing

Initialization

Employ Instant-NGP & render a depth map for each view

PMVO

Filter out the noise of P_{raw} & optimize the 3D direction for each 3D point

DeepMVSHair*

Render an undirectional strand map & a depth map with 16 fixed views

Infer an inner structure

Hair Grow

Generate strands & connect to scalp & remove ambiguity