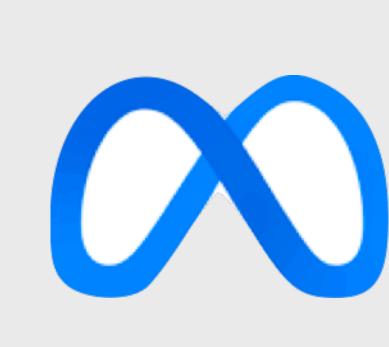


BANMo: Building Animatable 3D Neural Models from Many Casual Videos

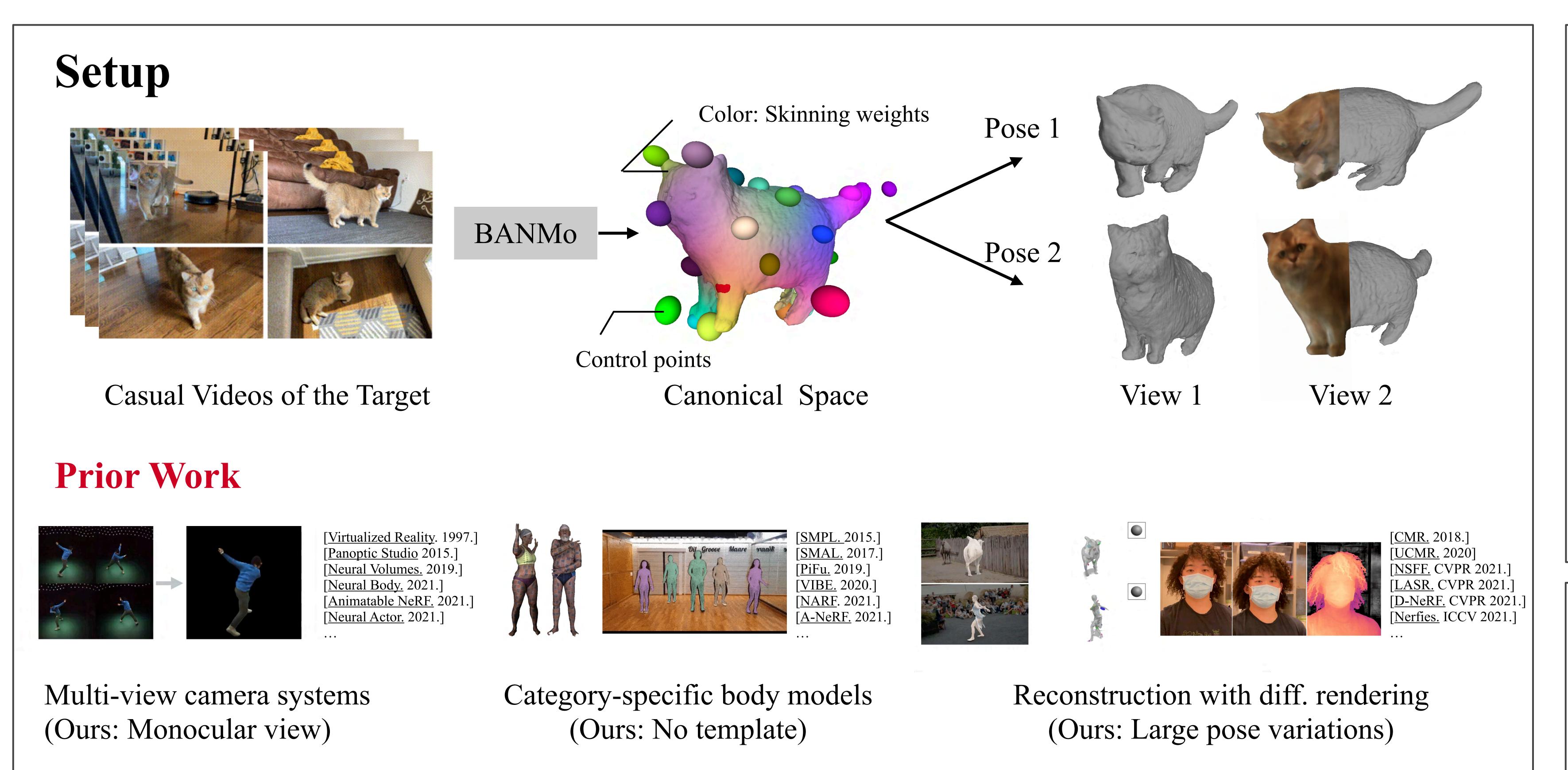


Interactive 3D model

3D-printed shapes



Gengshan Yang, Minh Vo, Natalia Neverova, Deva Ramanan, Andrea Vedaldi, Hanbyul Joo

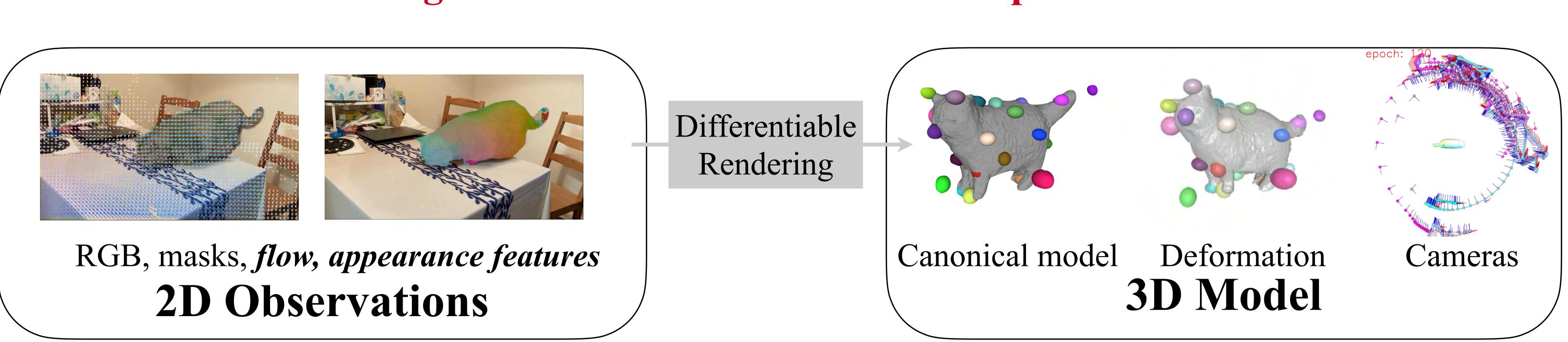


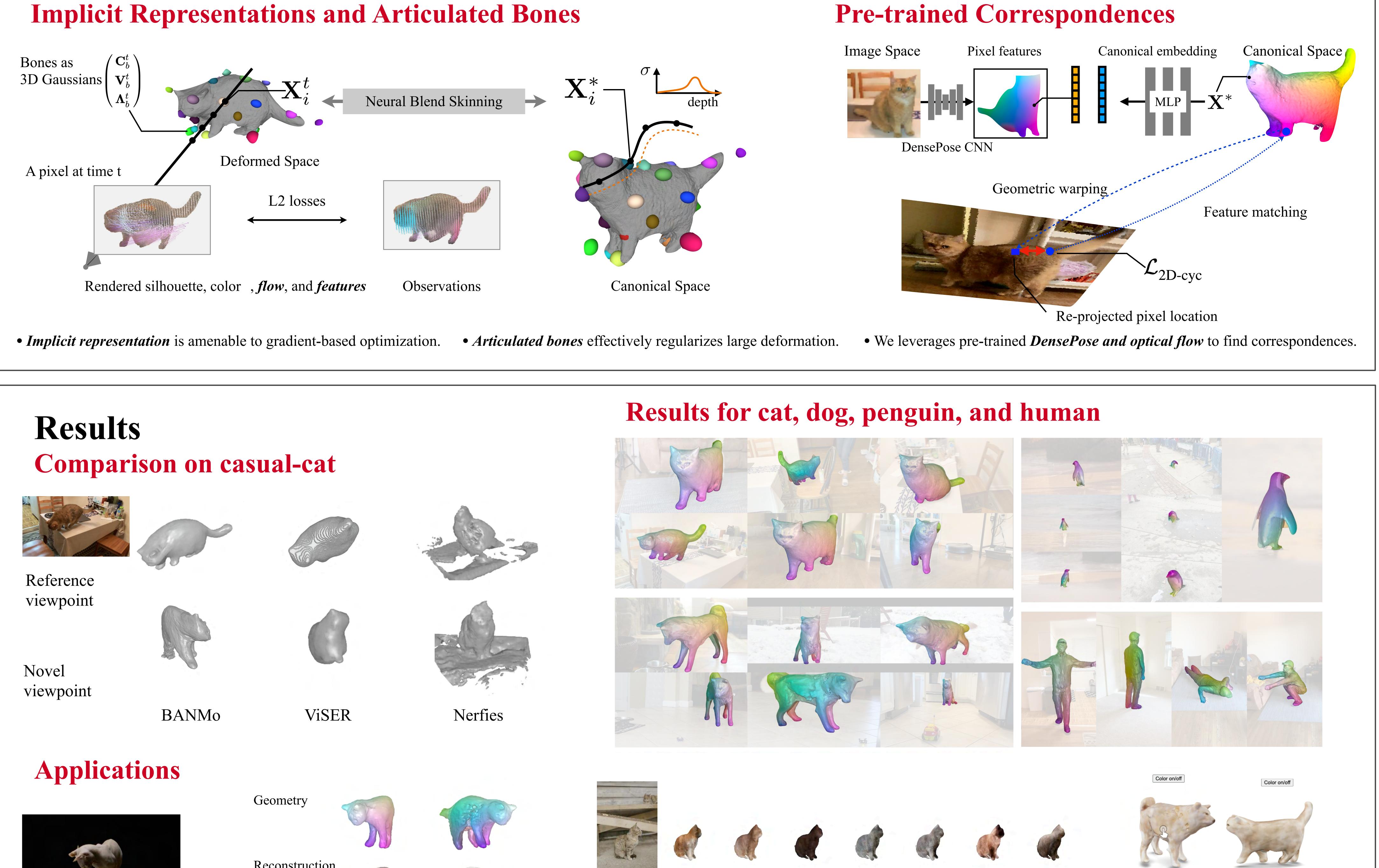
Approach

How to register casually-captured videos to a canonical 3D space?

- Challenges
- Unknown camera poses and different time, lightings.
- Free body motion and large pose variations.
- No template 3D body model.

Differentiable Rendering + Pre-trained DensePose and Optical Flow





Viewpoint 2

Re-targeted motion

Source model (British short hair)

Motion retargeting results to other cat breeds