

# N-Cloth: Predicting 3D Cloth Deformation with Mesh-Based Networks Supplementary Material

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## 1. Supplementary Results

Fig. 1 highlights the predictions of our method on unseen body shapes. The body shapes in Fig. 1 are obtained from [PLP20] through extract meshes from parameters of SMPL model [LMR\*15]. All body meshes of different shapes have the same topologies with the same numbers of vertices and faces. Thus we train a single network for bodies with different shapes. Figs. 2 highlights our results on cloths of different resolutions. Our method is prominent to manage the cloth mesh with 100k triangles. If there are multiple disjoint obstacles, we combine these obstacle meshes into a single mesh and generate the cloth predictions, as shown in Fig. 3. The fine results reveal that our method is able to process multiple obstacles whose topologies are disconnected.

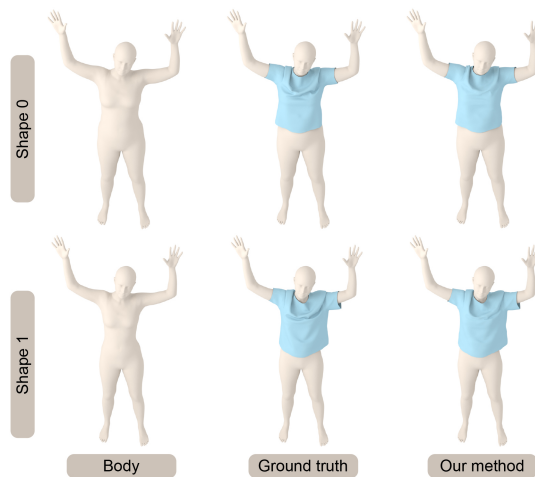


Figure 1: The ground truth and predictions of our network on body shapes unseen in TailorNet.

## 2. Quantitative Comparisons with TailorNet

Figure 4 shows the error curve of our method and the predictions of TailorNet [PLP20] with ground truth on the test frames. The test frames are obtained from the test data split from TailorNet. The

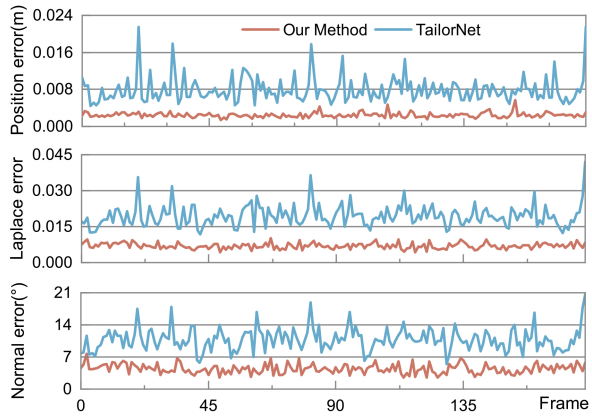


Figure 2: We vary the mesh resolution for a given cloth robe between 20K and 100K triangles. In each case, our predicted cloth mesh is similar to the ground truth.



Figure 3: Our method works well on multiple, disjoint obstacles.

error is calculated as depicted in Eq. 12 in the main paper. From the curve, the trend of the errors of our network prediction is lower than TailorNet [PLP20].



**Figure 4:** The errors between our network and TailorNet on the test frames.

## References

- [LMR\*15] LOPER, MATTHEW, MAHMOOD, NAUREEN, ROMERO, JAVIER, et al. “SMPL: A skinned multi-person linear model”. *ACM transactions on graphics (TOG)* 34.6 (2015), 1–16 1.
- [PLP20] PATEL, CHAITANYA, LIAO, ZHOUYINGCHENG, and PONS-MOLL, GERARD. “TailorNet: Predicting clothing in 3d as a function of human pose, shape and garment style”. *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition*. 2020, 7365–7375 1.