## DF<sup>2</sup>Net: A Dense-Fine-Finer Network for Detailed 3D Face Reconstruction Supplementary Material

## More Alternative dense-fine-finer architectures

We give two more dense-fine-finer architectures in our work, namely i) Pix2vertex+Fr-Net and ii) D-Net with SfS loss. The first one means that the input depth maps of Fr-Net come from previous method [28], and the original D-Net and F-Net are removed. The second one use an additional SfS loss to train the D-Net. The training data of these two alternative architectures is the same as the one of default  $DF^2Net$ . Figure 9 shows a qualitative comparison between our default  $DF^2Net$  and the above two alternative architectures. We can see that, our D-Net and F-Net give accurate initial shape for our final details reconstruction. As shown in the bottom row, adding the SfS loss to D-Net gets much bad result compare with our default  $DF^2Net$ . Which demonstrate the effective of our strategy that decomposing 3d face reconstruction into three stages.



Input

Pix2vertex+Fr-Net



Input

D-Net with SfS loss

DF2Net

**DF2Net** 

Figure 9: More Qualitative evaluation of alternative dense-finefiner architectures.

## **Visualization Result**

We present more qualitative reconstruction results of our DF2Net on varied facial expressions and poses in the following. In Fig.10,11, the four columns respectively depict the input image, the reconstructed 3D face showed with different poses, the reconstructed 3D shape with texture.



Figure 10: 3D facial reconstruction results under pose variances.



















Figure 11: 3D facial reconstruction results with expression variances.