Occlusion-Robust Texture Completion

3DMM Fitting

Face Parsing

StyleGAN Encoder

Poisson Blending

Projection & Generation & Fusion

Texture-guided Facial Geometric Detail Recovery

G_c

Ⓡ

Rendered multi-view images

Diffuse Normal

Specular Normal

n_p x_p

Detailed surface

n_p^* x_p^*

Coarse mesh

Geometric Network

PBIDR

Diffuse Albedo $\mathcal{A}$

Diffuse Shading $\mathcal{D}$

color

$\mathcal{A} \odot \mathcal{D} + a_s \mathcal{S}$

Specular Shading $\mathcal{S}$

G_f

→ Ray Ⓡ Renderer 🟢 Surface point and **specular** normal

Ⓒ Camera 🟡 Mesh point and **diffuse** normal