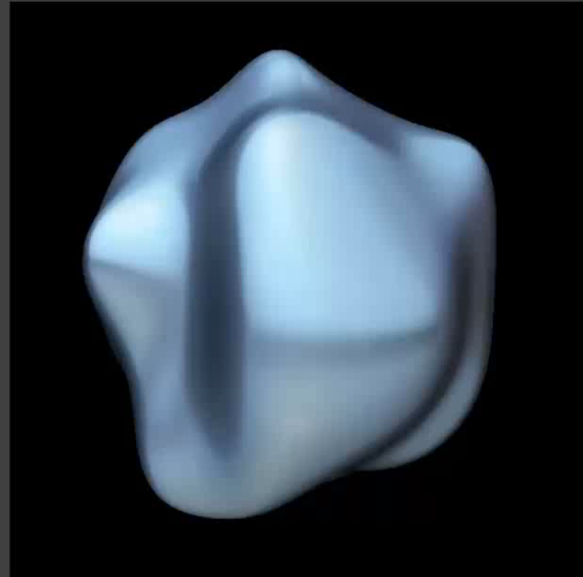# Surface ST vs Image ST

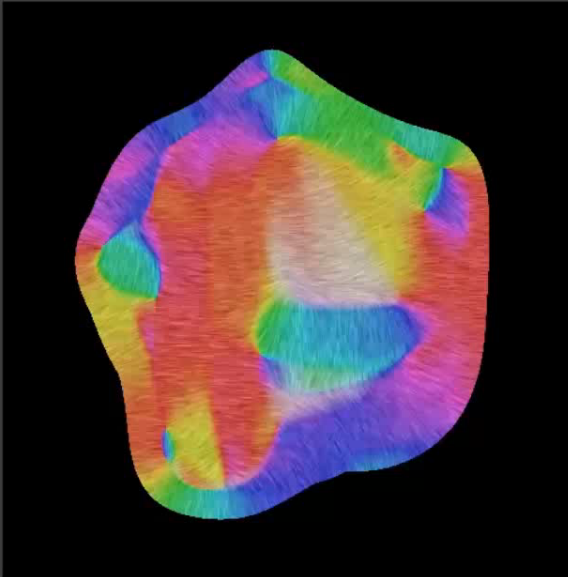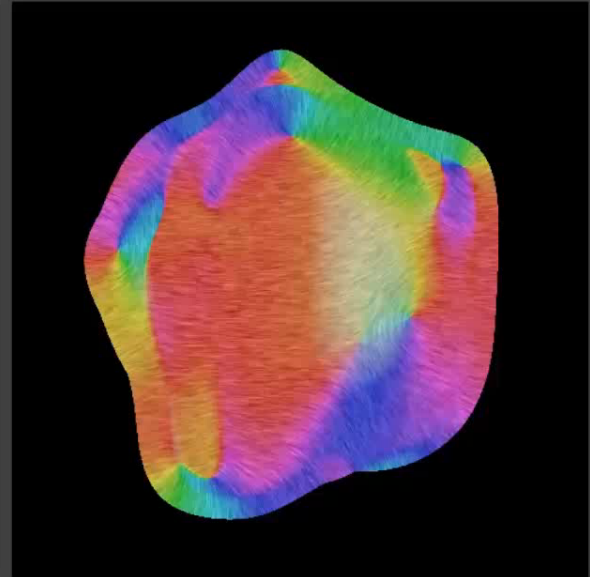CG rendering   Image based ST   Surface based ST

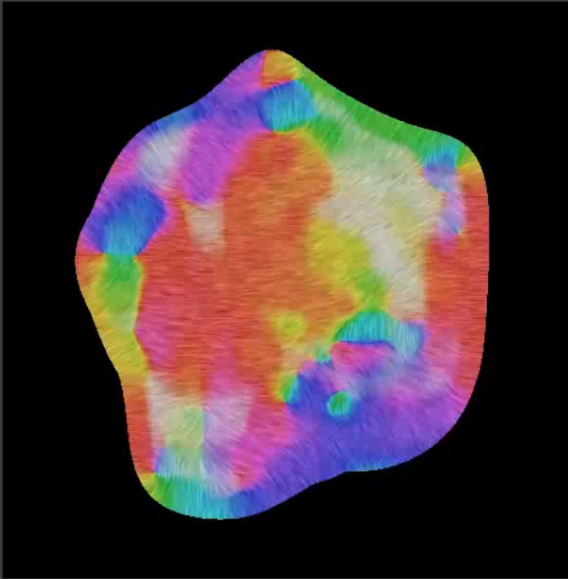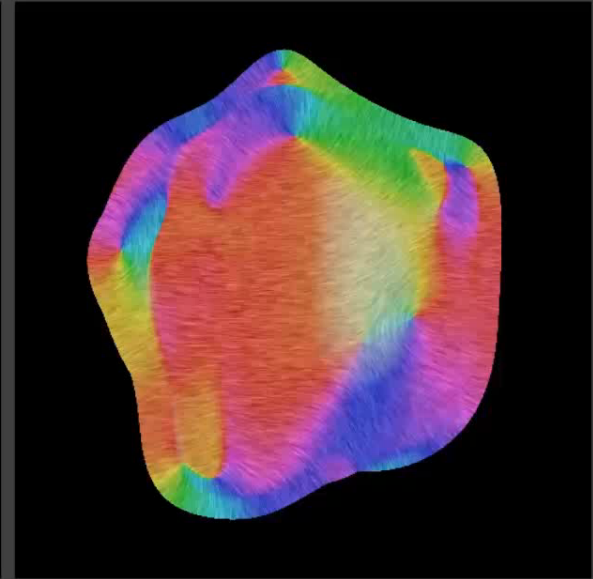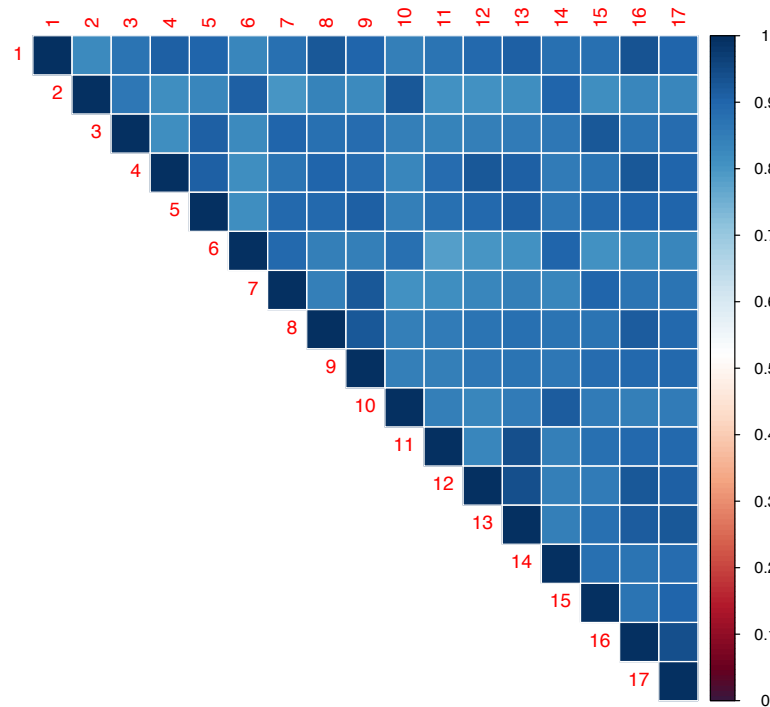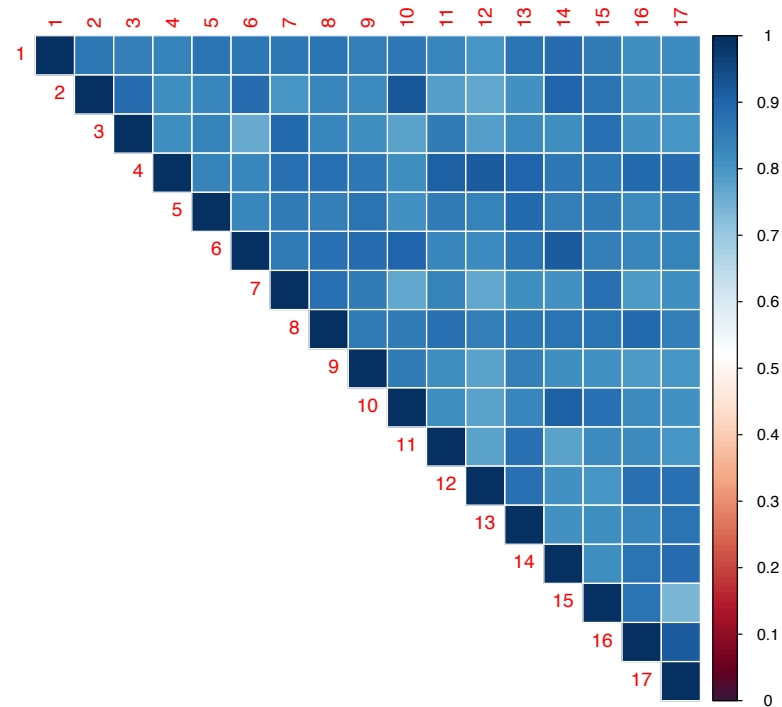# Shape ST vs Image ST

CG rendering   Image based ST   Surface based ST
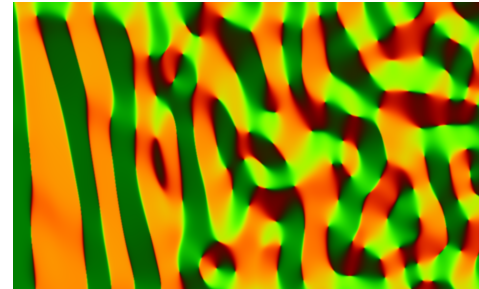
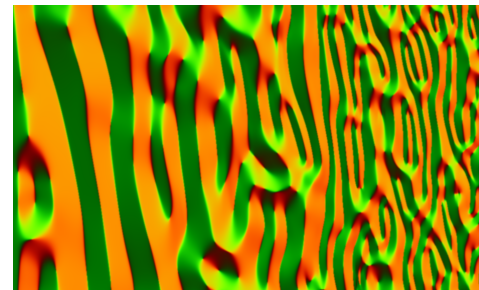# Shape ST vs Image ST correlation

Direction
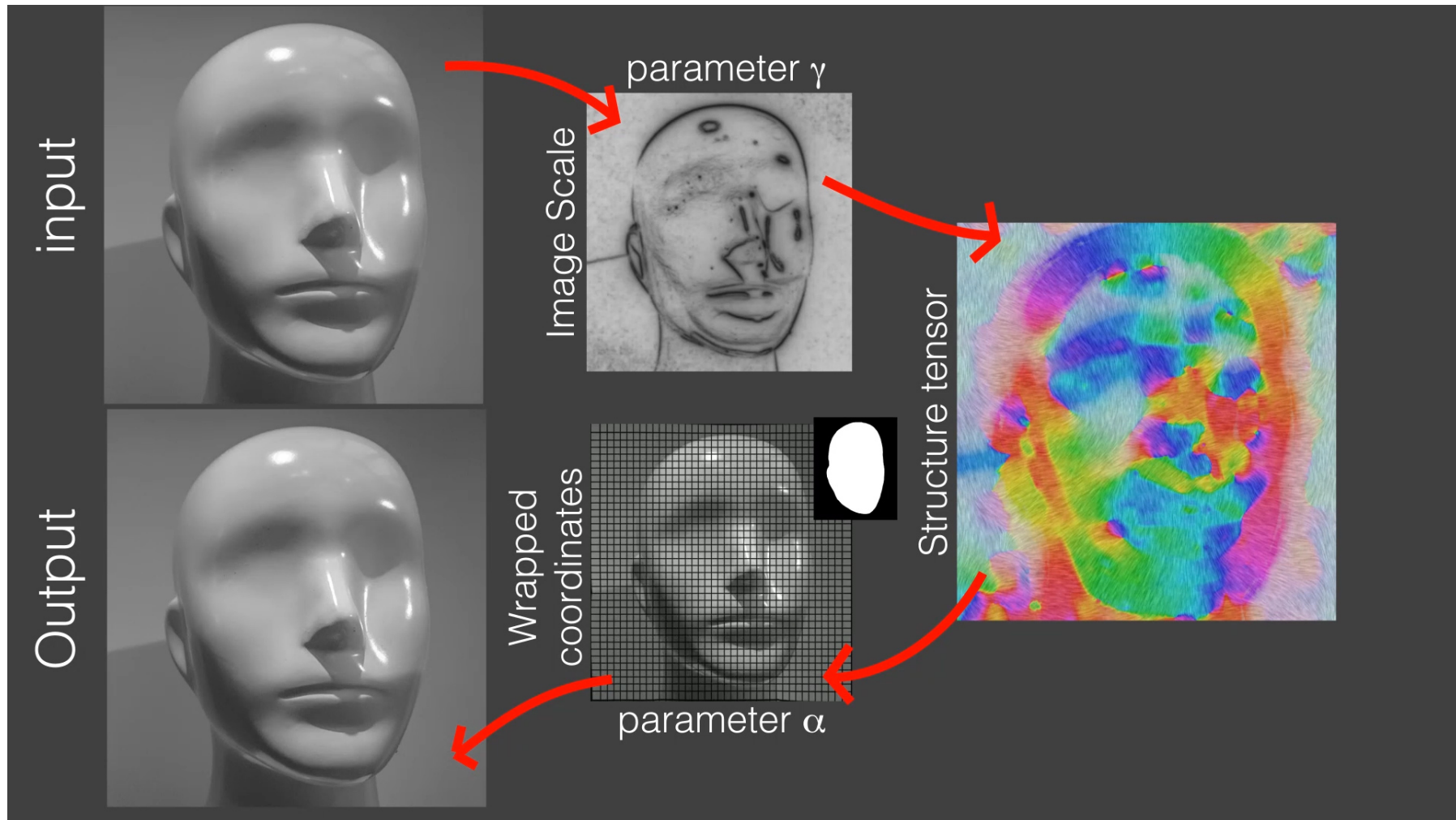
Max eigen value
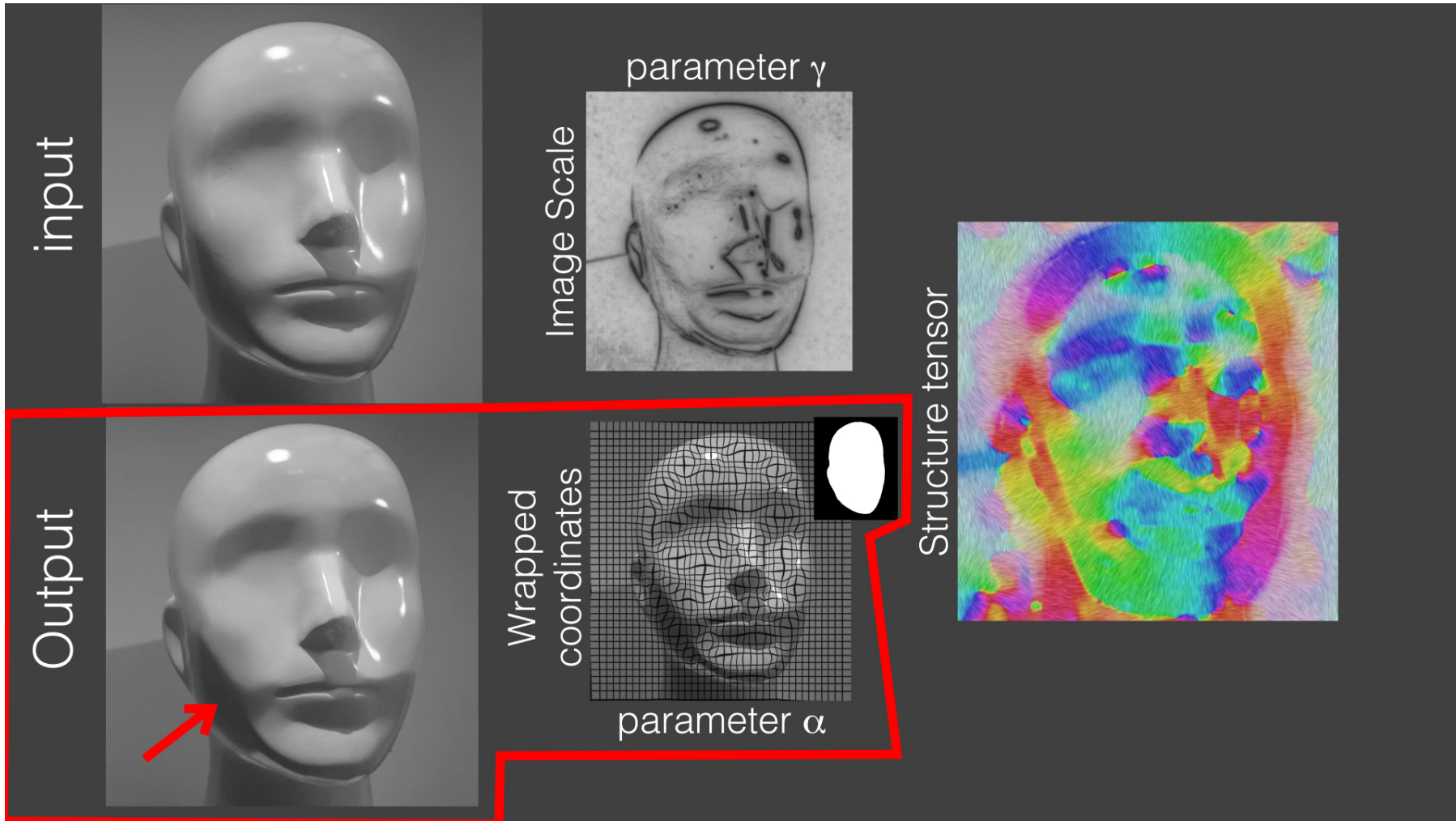
Scale selection

Uniform

Local

$$\sigma_I(\mathbf{p}, \gamma) = \frac{\int \sigma^{2\gamma} \, \beta_I(\mathbf{p}, \sigma) \, d\sigma}{\int \beta_I(\mathbf{p}, \sigma) \, d\sigma}$$
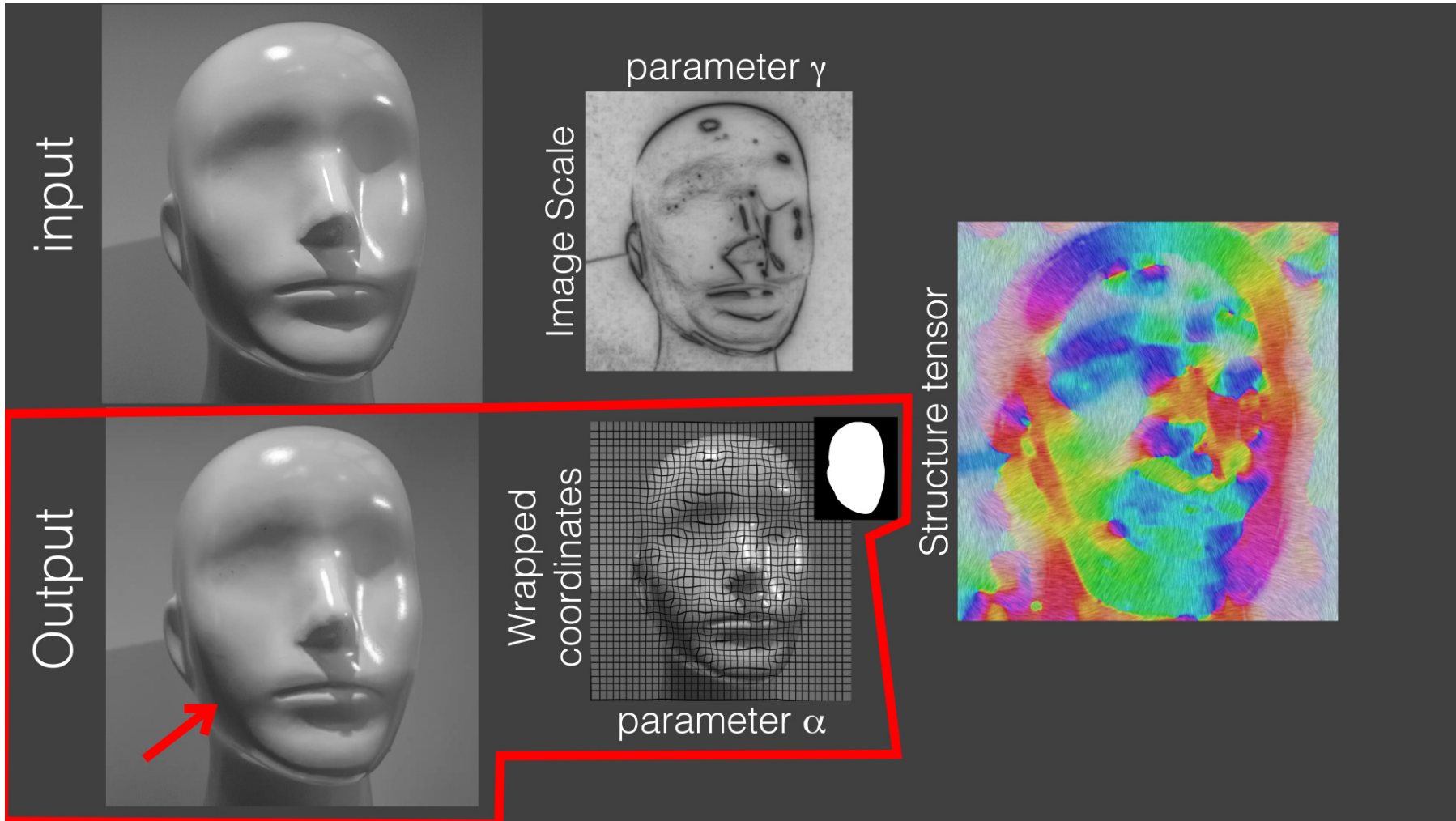
Inría
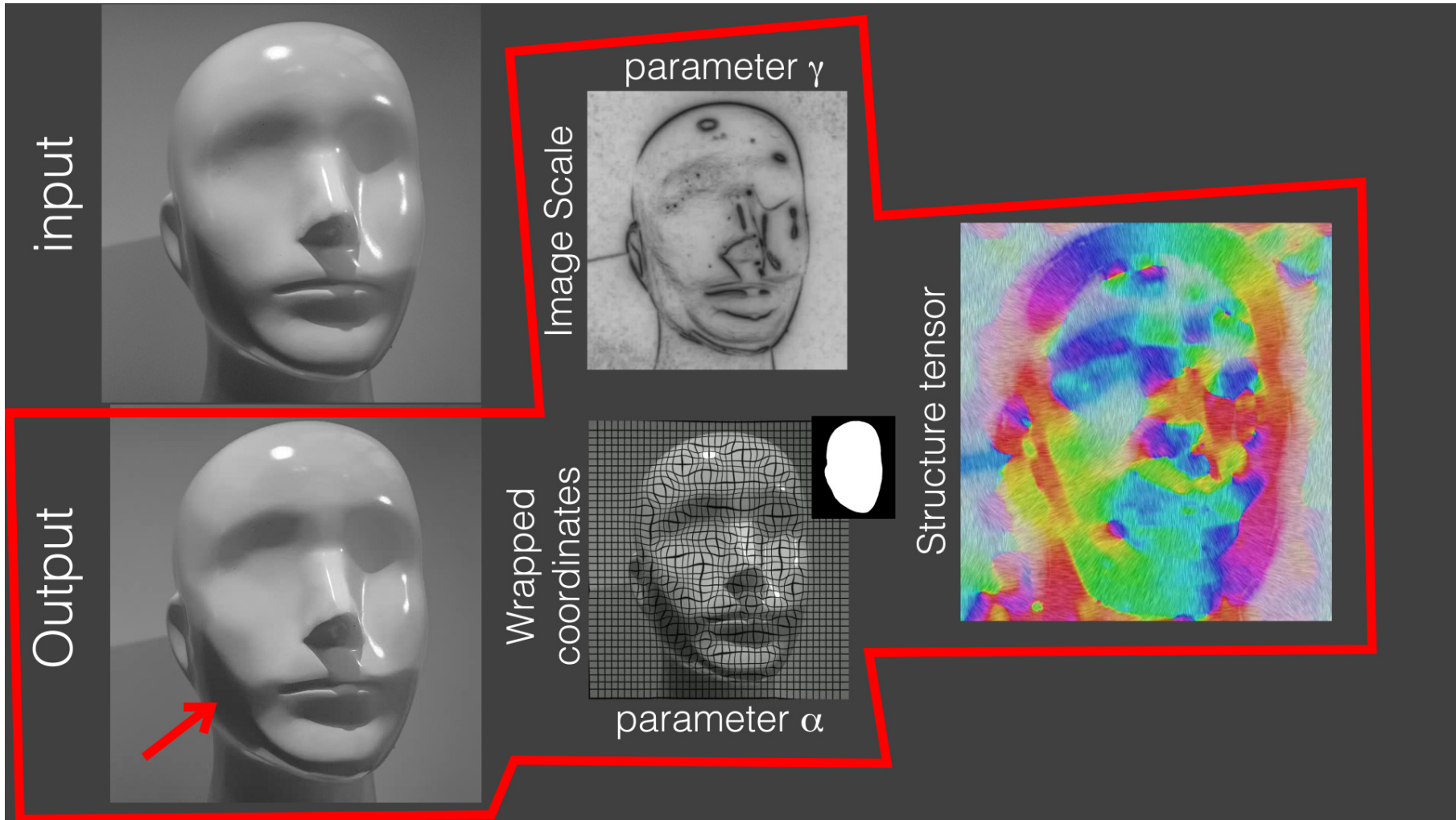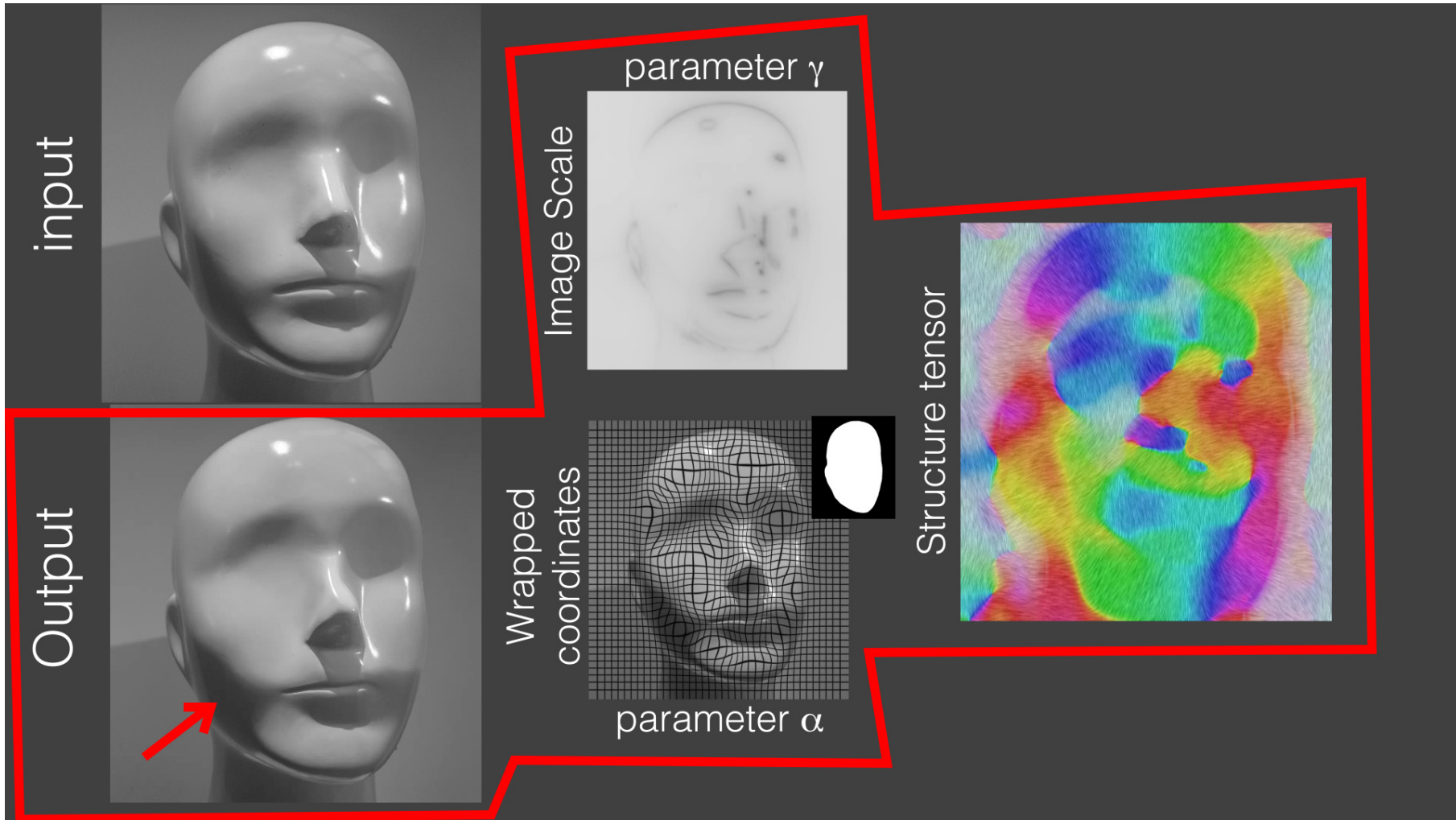
Warping pipeline
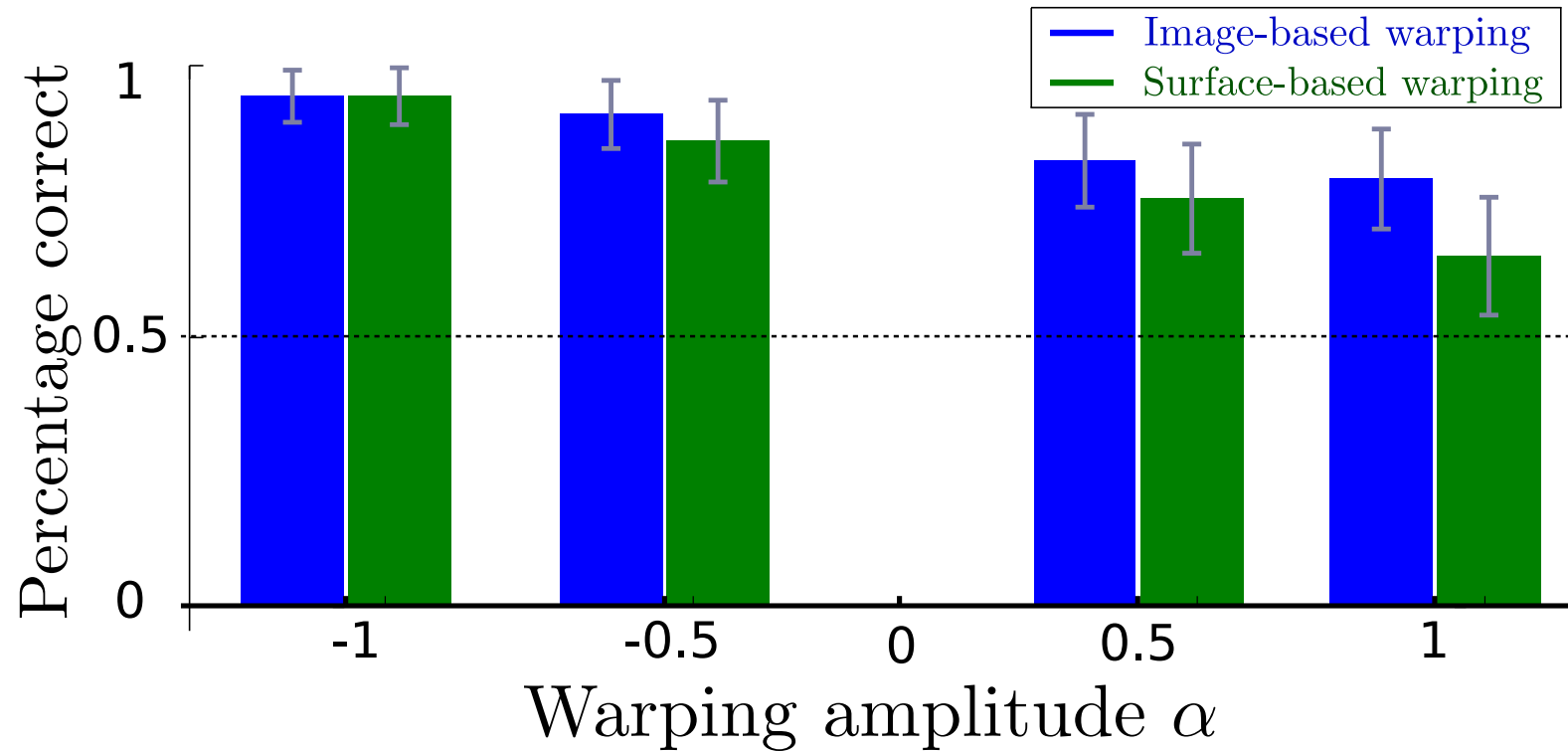
Sharpening: α = -1

Rounding: $\alpha = 1$

Sharpening, small scale

Sharpening, large scale

input

Output

parameter γ

Image Scale

Wrapped coordinates

parameter α

Structure tensor

User study

Results

Conclusion

Perception issues in Visualization

   Perception of Depth – Application to DVR evaluation

   Perception of Noise – Application to Uncertainty Vis.

   Perception of Shape – Application to Image manipulation

In this talk: low level visual perception issues

   cognitive levels much more difficult

Take away message: perception matters!