

A Comparison of Four BRDF Models

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PCG-04-2

April, 2004

We compare four parametric reflectance models that are well-known in computer graphics: the Phong, Ward, Lafortune, and He-Torrance models. We compare the models with physical measurements on five representative sample surfaces. The surfaces span the domain of isotropic, homogeneous surfaces ranging from smooth to rough and including metal and dielectric surfaces. Since no one model was a clear winner in all cases, we draw conclusions about which of the models are best to represent various surfaces. We explain the differences in terms of the basic scattering phenomena involved.

[This report was submitted for publication at the 2004 Eurographics Symposium on Rendering.]

