

Peer Review

Review of: "Acquisition of Spatially-Varying Reflectance and Surface Normals via Polarized Reflectance Fields"

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The proposed method estimates the surface normal, the albedo, the roughness, and several other parameters. The polarized light is used for separating diffuse reflection and specular reflection. The target object is illuminated from various directions.

The proposed method is well considered. Each component of the proposed framework is convincing. The method is reliable and useful.

The quantitative evaluation is not shown. This is a critical problem with the paper. Also, the ground truth for each result is not shown.

Fused normal is not shown. Or, is the surface normal not fused?

Some of the experimental results in the Appendix can be moved to the main manuscript.

I missed something, but is the reason why the multiview images are measured explained?

What is the difference between the specular variance and the roughness?

Why are the diffuse normal and the specular normal separately estimated?

Is the judgement of interreflection correct? What kind of assumption is made to deal with the interreflection?

Because the Stokes vector and the Mueller matrix are not used, the explanation of those can be omitted from the Appendix.

Please use the best solver. Thus, the comparison between each solver shown in the Appendix can be omitted.

Since the quantitative evaluation is not shown, I have to reject this paper. However, the proposed method is good enough. The editorial office should encourage the authors to resubmit if this paper is rejected.

Declarations

Potential competing interests: No potential competing interests to declare.