
Le-Bourget-du-Lac, February 6, 2026

Dear editors

Please find enclosed our paper

"Visibility on digitized shapes and convergence of a normal estimator"

which we submit to the JMIV special issue on Discrete Geometry and Mathematical Morphology. It is the extension of our DGMM2025 paper "Fast and exact visibility on digitized shapes and application to saliency-aware normal estimation".

As announced in our expression of interest message, we have extended the paper along the following lines :

- We have added proofs regarding the convergence of the normal estimator on digitized smooth surfaces.
- In order to add those proofs, we updated the definition of the visibility, now named " k -visibility", which is more general and allows to control the regularity of the visibility cone. We have also added a discussion regarding this new definition and its relation to the original one.
- We improved experiments to analyze the behavior of the normal estimator on piecewise-smooth surfaces and with different kernels (uniform, gaussian, ring). and compared it with other normal estimators.
- We have added some illustrations regarding piecewise-smooth surfaces studies alongside reworking older ones.
- The paper is now // TODO CHECK PAGES-17-18 // pages long in 2-column format.

We believe this extended version of our paper will be a valuable contribution to the JMIV special issue, and we look forward to hearing from you soon.

Best regards

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