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Improved Stratification for Metropolis Light Transport

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Highlights

- Discussion of stratification problems of the Metropolis algorithm, and showing ways for improvement.
- Discussion of the difficulties of adaptive mutations.
- Proposal of a simple mutation strategy to improve the stratum of samples and thus reducing the integration error. We come to the conclusion after theoretical analysis that it is worth reducing the mutation size where the current sample is of high importance, which also makes sense intuitively.
- Analysis and visualization of the method in 2D.
- The application of the sampling method in 3D global illumination rendering.

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