Noisy Path Reference Class

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A Noisy Path Reference Class is a Path Reference Class with a term for noise.

Noisy Path Reference Class = Path Reference Class + Noise

For example, one can use Generalized Pascal's Triangle for 2D. One property of Generalized Pascal's Triangle is that odd-layers can be skipped by deriving a weight matrix for even-layers only.

For 2D this gives the following weight matrix for even-layers:

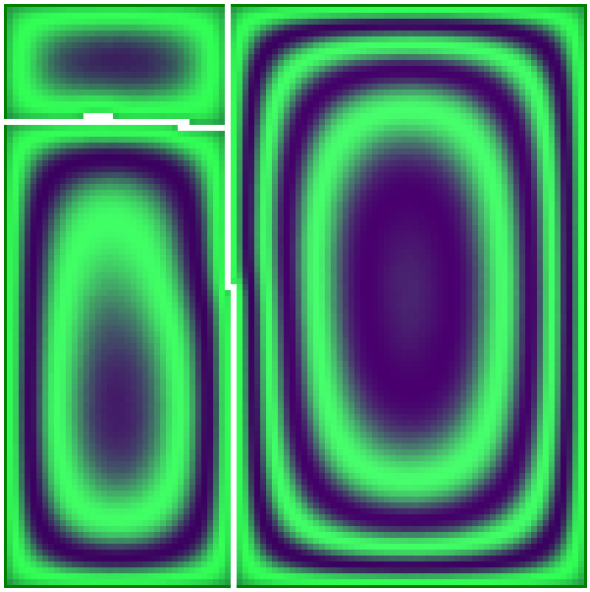
1	2	1
2	4	2
1	2	1

In addition to this sum, there is a term for noise, for example:

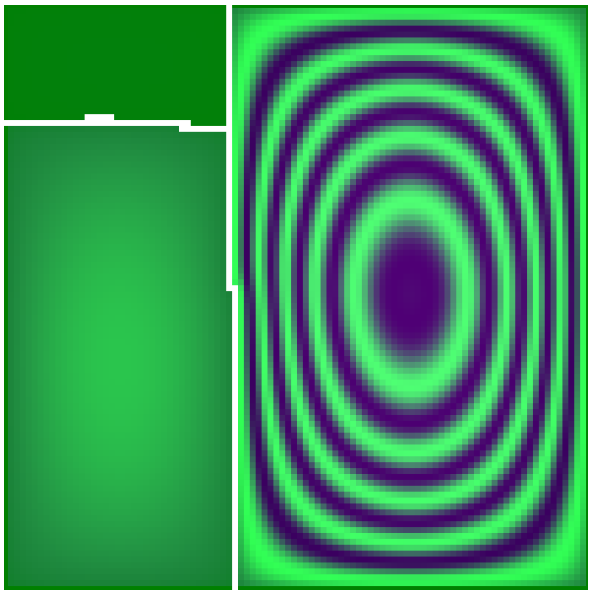
+ 0.00001 * random()

Usually, one normalizes after each step. This means that the noise becomes more significant over time.

The benefit of a Noisy Path Reference Class is that is preserves local maxima over time:



With noise (preserving local maxima)



Without noise (loosing local maxima)

Here, the contour plot with noise shows **the proximity to zero-constraints**.