Spatiotemporal Variance-Guided Filtering for Motion Blur

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Motion Blur
Post Process Motion Blur
Ray-Traced Motion Blur
Fast and High-quality?
Spatiotemporal Variance-Guided Filtering
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Weight Function
Spatiotemporal Variance-Guided Filtering
Spatiotemporal Variance-Guided Filtering
Spatiotemporal Variance-Guided Filtering
Spatiotemporal Variance-Guided Filtering

Search Window
Spatiotemporal Variance-Guided Filtering
Spatiotemporal Variance-Guided Filtering
Spatiotemporal Variance-Guided Filtering
Spatiotemporal Variance-Guided Filtering
Spatiotemporal Variance-Guided Filtering
The Complete Picture
Spatiotemporal Variance-Guided Filtering
The Complete Picture
Spatiotemporal Variance-Guided Filtering
The Complete Picture

Spatial Filter (x3)

Temporal Filter
Spatiotemporal Variance-Guided Filtering
The Complete Picture
Spatiotemporal Variance-Guided Filtering
The Complete Picture
Results
Results

Ours

4096spp

FLIP

1spp
Results

Ours

4096spp

FLIP

1spp
Performance

Measurements @ 1920x1080 on AMD RX 6800 XT
Conclusion

- Reduced Variance
- Temporally Stable
- Real-time Performance
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