

Supplemental Material to EuroVA 2020 Submission #1005:
SpatialRugs: Representing 2D Space in Dense Pixel Displays
for Movement Visualization

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This document contains supplemental material for the paper “SpatialRugs: Representing 2D Space in DensePixel Displays for Movement Visualization”. It consists of a larger representation of the SpatialRugs in Figure 2 of the paper, a set of differently parameterized visualizations generated using our pooling-based time-aware color smoothing approach, a similar comparison of different parameterizations for gaussian blurred SpatialRugs, and a comparison of the pooling-based time-aware color smoothing applied to the color maps discussed in the paper. The base data used for all visualizations is described in Figure 1 of the paper and includes 151 fish moving collectively through a tank over the course of about 90 seconds. The code to create the color smoothing can be found at <https://github.com/dbvis-ukon/time-aware-color-smoothing>.

1 Enlarged results for various color maps

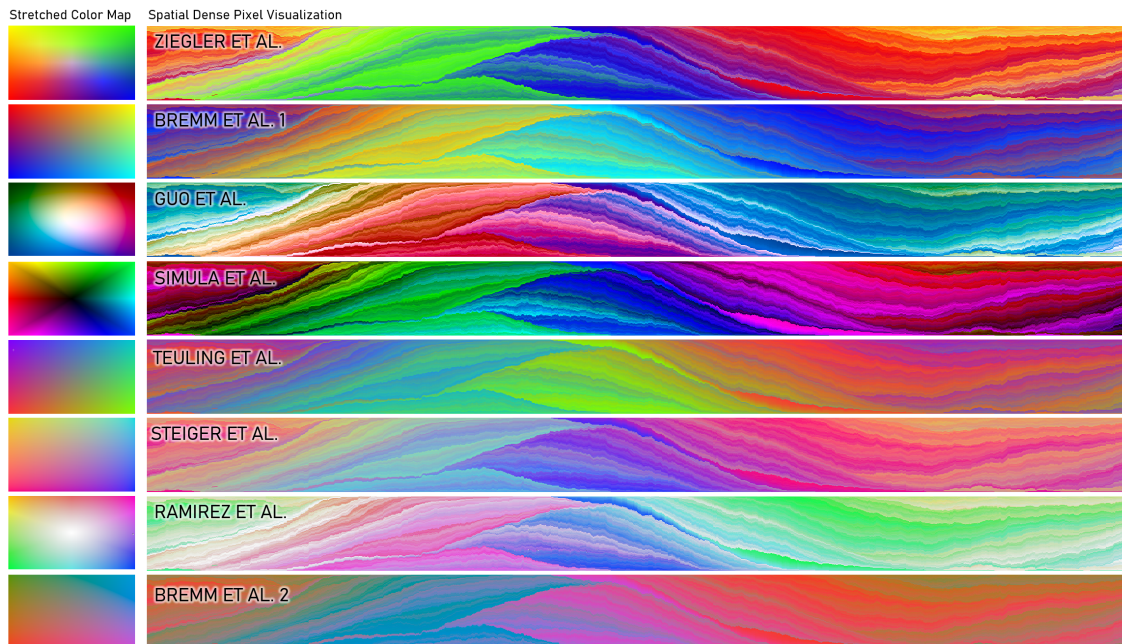


Figure 1: This figure contains an enlarged version of the SpatialRugs generated with the color maps mentioned in the paper for better comparison.

2 Pooling-based Time-Aware Color Smoothing

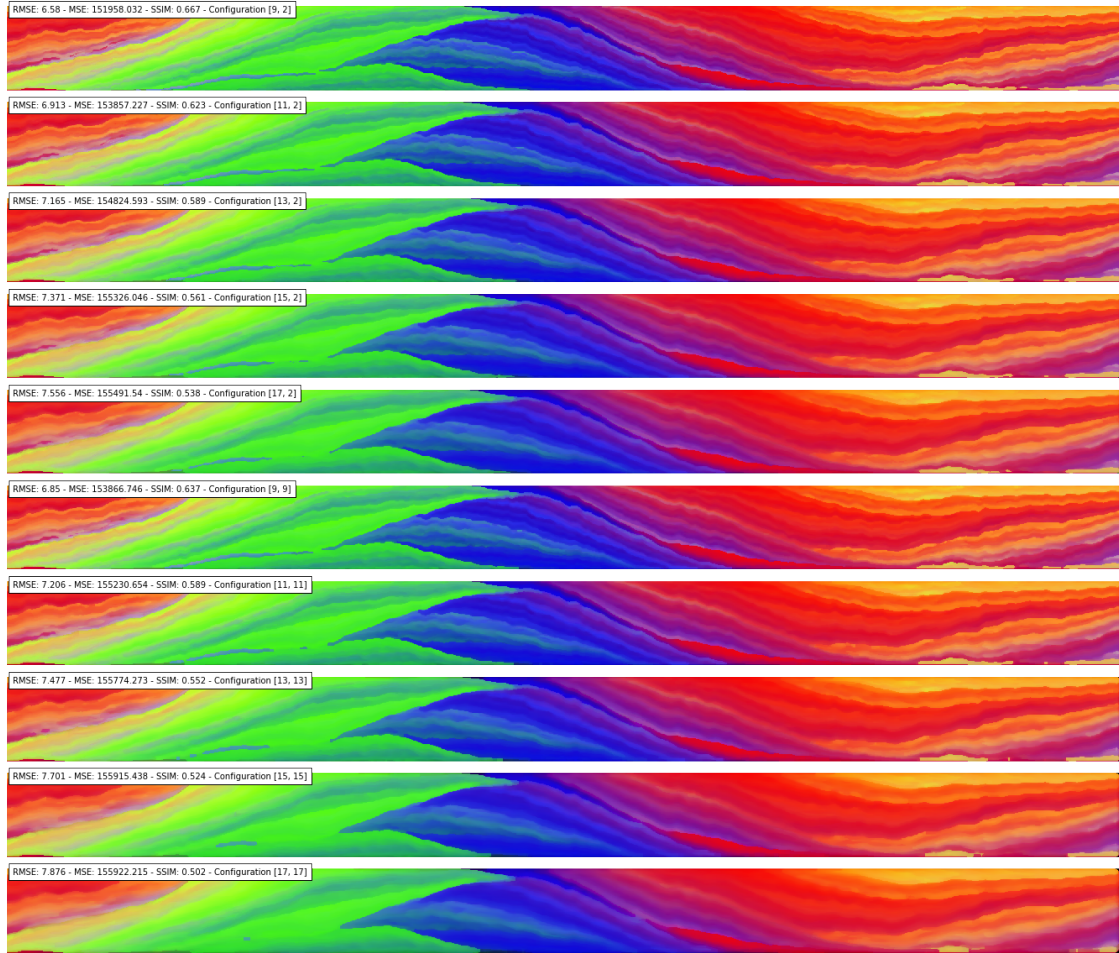


Figure 2: This figure contains a comparison of increasingly aggressive parameterizations for the pooling-based time-aware color smoothing approach presented in the paper. The first five SpatialRugs feature a triangular, the last five SpatialRugs a rectangular matrix size.

3 Gaussian blur

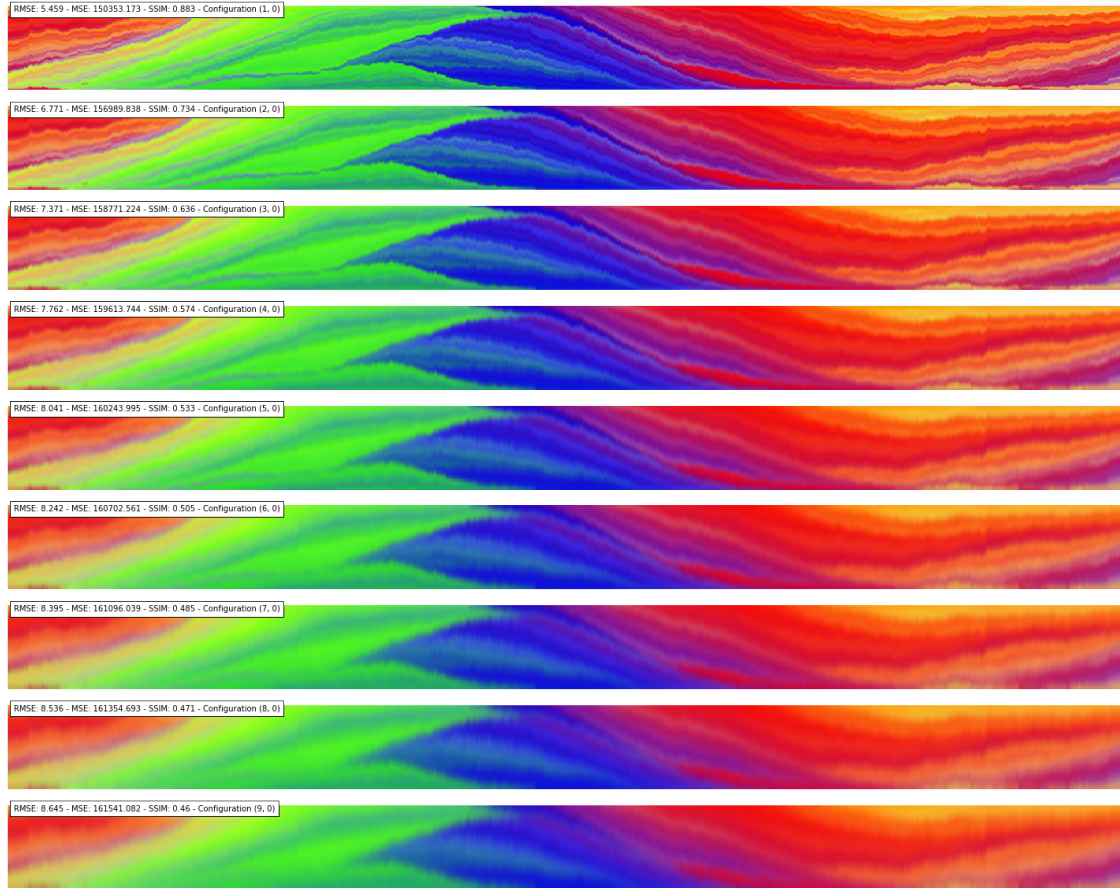


Figure 3: This figure contains comparison of increasingly aggressive parameterizations for gaussian blur applied to the original SpatialRug.

4 Smoothed versions of various color maps

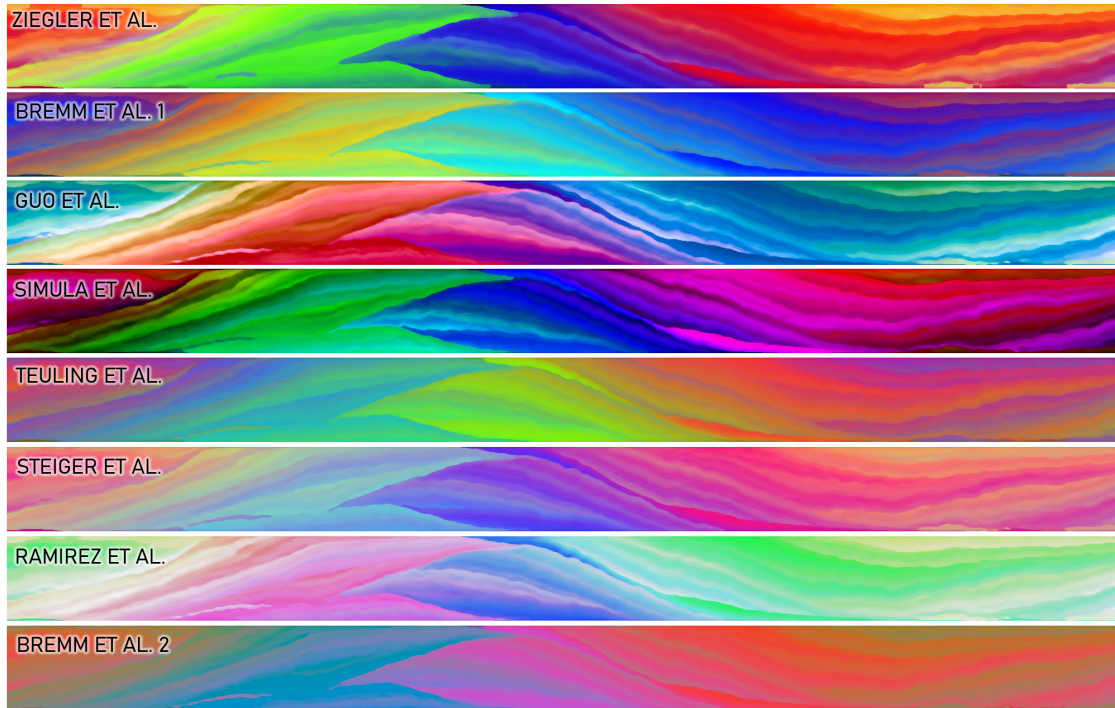


Figure 4: This figure contains our pooling-based time-aware color smoothing approach applied to the color maps mentioned in the paper.