

# Full-Reference Stereoscopic Video Quality Assessment Using a Motion Sensitive HVS Model: Supplementary report

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This report provides additional experimental results on the evaluation of the full-reference stereoscopic video quality metric proposed in [1].

## 1 Datasets

Figures 1, 2 and 3 show a sample image for each sequence from each of the three databases used for experimental evaluation, namely NAMA3DS1-CoSpaD1 [2], ROMEO [3] and Waterloo 3D-VQA [4]. The three databases cover a broad range of indoor and outdoor scenes with a wide variety of motion activity levels.

## 2 Scatter plots between predicted score and subjective

Scatter plots showing the prediction score against the subjective score are shown in Figures 4 and 5 in the case of the ROMEO [3] and Waterloo 3D-VQA [4] datasets. A scatter plot is provided for each of the two proposed approaches (MSBEQM<sub>bin</sub> and MSBEQM<sub>lin</sub>) as well as for nine existing quality metrics (SSIM [5], SSIM\_Ddl [6], VQM [7], StSD [3], PQM [8], 3D-STs [9], SJND-SVA [10], BEVQM $\mu$  [11] and BEVQM $\beta$  [11]). In the scatter plots, samples corresponding to different sequences are represented using different symbols as specified in the legend. The different instances of a given symbol represent the different stimuli. Scatter plots relating to the MSBEQM<sub>bin</sub> and MSBEQM<sub>lin</sub> approaches tend to be more clustered along lines. This trend is confirmed by the higher correlation scores reported in the main paper. This trend is most apparent in the case of the Waterloo 3D-VQA data which contains a larger number of stimuli compared to the ROMEO dataset.

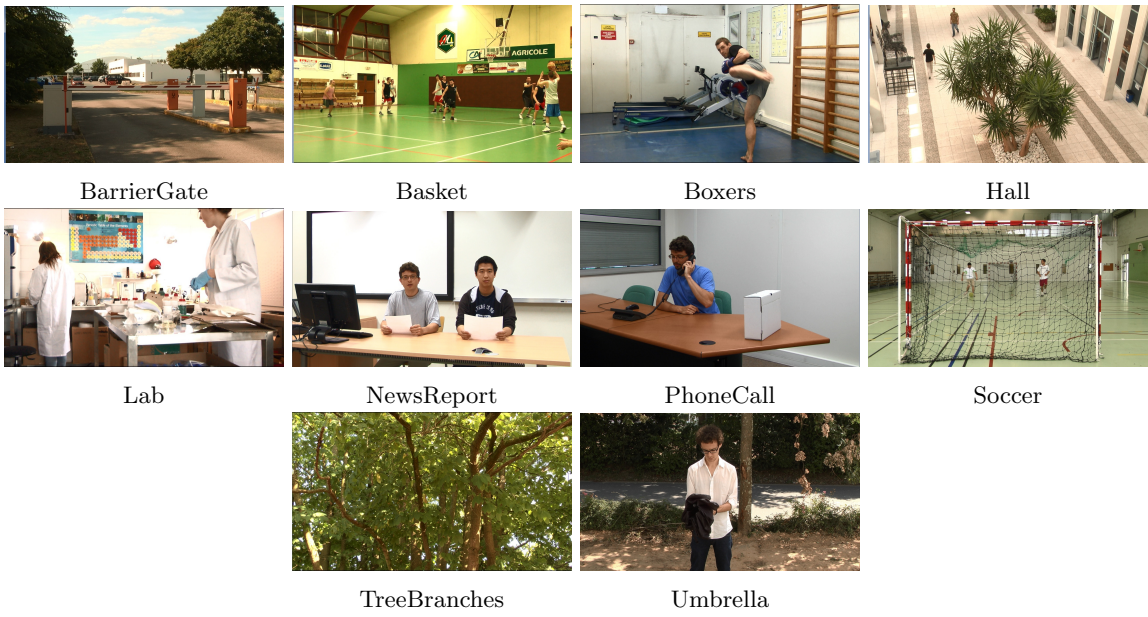


Figure 1: Sample images from the NAMA3DS1-CoSpaD1 database [2].

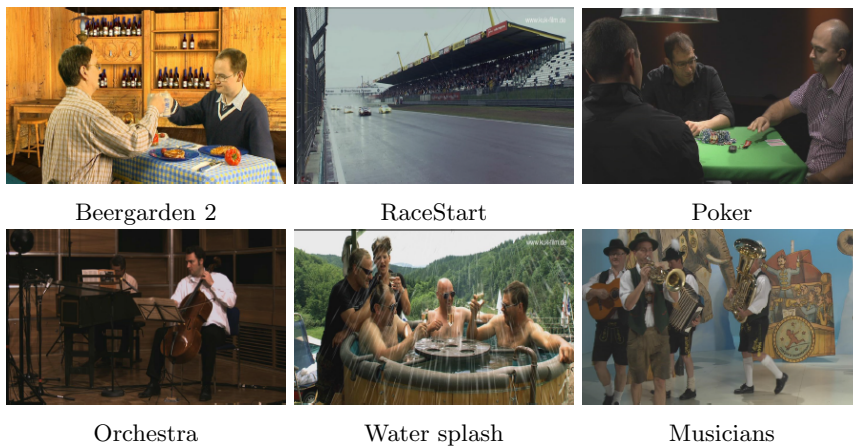


Figure 2: Sample images from the ROMEO database [3].

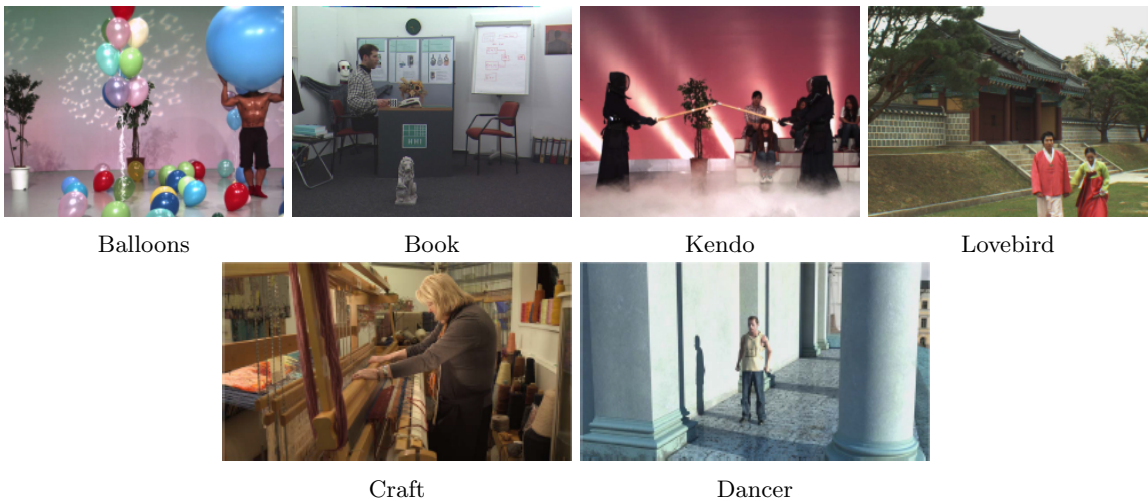


Figure 3: Sample images from the Waterloo 3D-VQA database [4].

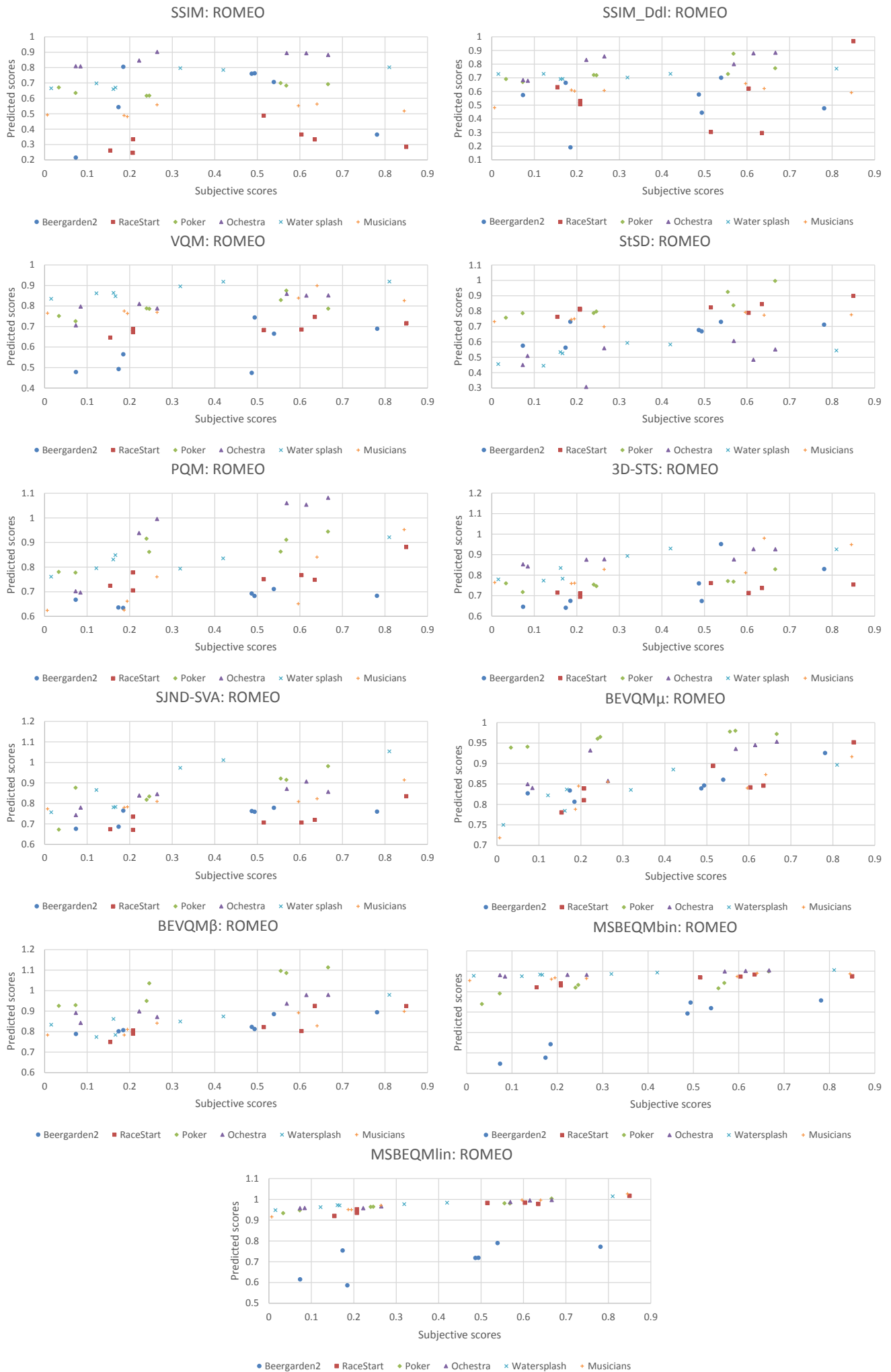


Figure 4: Scatter plot for the ROME0 database [3].

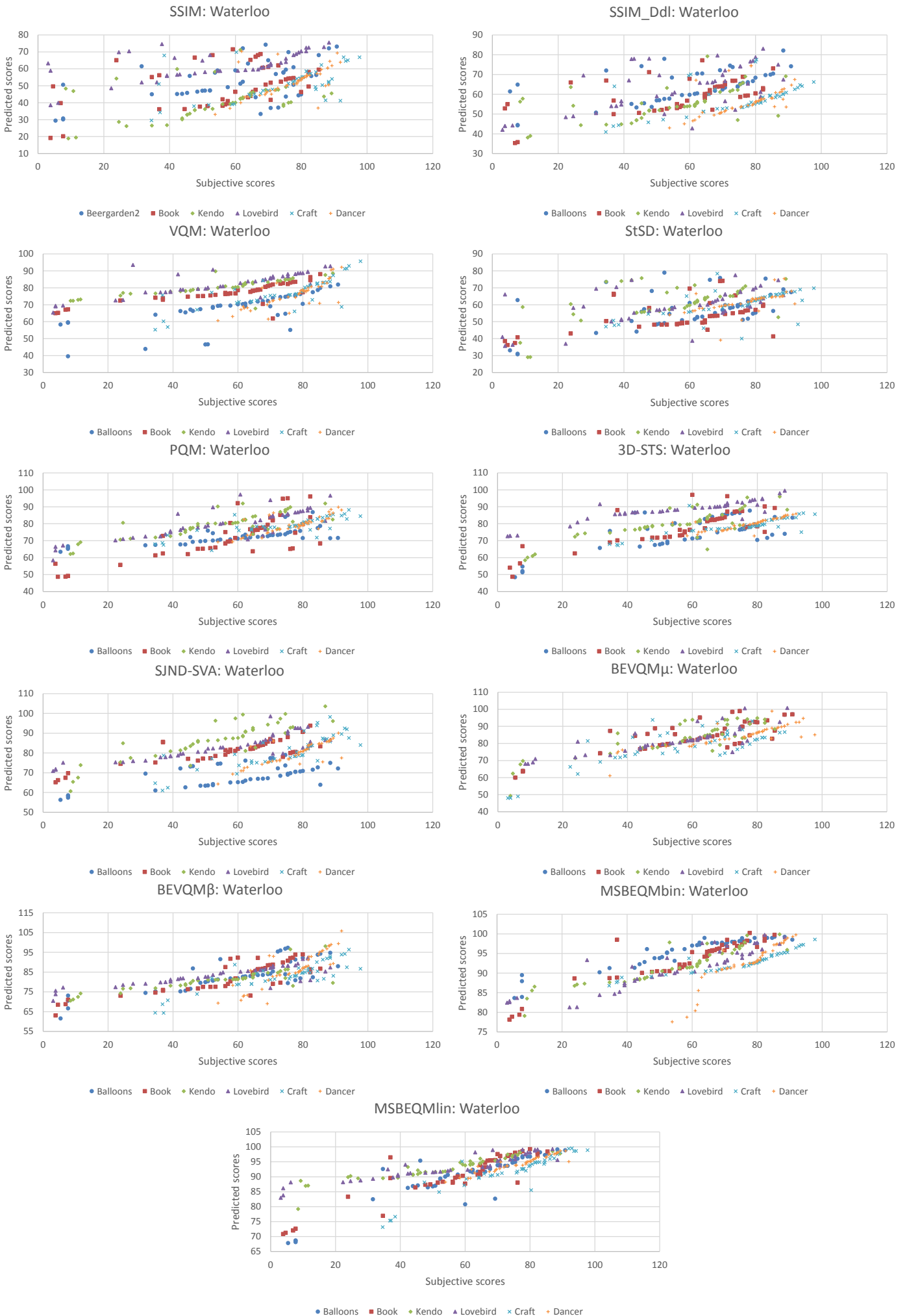


Figure 5: Scatter plot for the Waterloo 3D-VQA database [4].

## References

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