**BLeSS: Bio-inspired Low-level Spatiochromatic Similarity Assisted Image Quality Assessment**

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**Motivation**

Billions of images are shared every day. Supported resolution by display systems: up to ultra HD

Related Applications

- Smart Capture
- Remote Assistance

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**Problem Description**

Applications started to catch up with high resolution.

Users are concerned about network usage.

To balance quality and network usage, image optimization requires image quality assessment.

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**BLeSS Pipeline**

- Wavelet Transformation
- Grouplet Transform
- Center Contrast Sensitivity Normalization
- Contrast Sensitivity Adjustment
- Spatiochromatic Grouping
- Inverse Wavelet Transform
- Euclidean Norm

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**Validation**

The number of distorted images with respect to degradation categories in each database.

Percentage performance (Spearman correlation) changes for BLeSS-assisted IQA methods over full databases.

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**Literature**

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<th>FSIMc</th>
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**Related Applications**

- Low resolution
- High resolution
- Ultra HD

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**Visualization**

Reference Image

Distorted Image

**BLeSS Maps**

- SR-SIM Map
- FSIM Map
- BLeSS Maps