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**A conditional multiscale locally Gaussian texture synthesis algorithm.** (English)

Zbl 1409.94504

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Summary: Exemplar-based texture synthesis is defined as the process of generating, from an input texture sample, new texture images that are perceptually equivalent to the input. In the present work, we model texture self-similarity with conditional Gaussian distributions in the patch space in order to extend the use of stitching techniques. Then, a multiscale texture synthesis algorithm is introduced, where texture patches are modeled at each scale as spatially variable Gaussian vectors in the patch space. The Gaussian distribution for each patch is inferred from the set of its nearest neighbors in the patch space obtained from the input sample. This approach is tested over several real and synthetic texture images, and its results show the effectiveness of the proposed technique for a wide range of textures.

**MSC:**

**94A08** Image processing (compression, reconstruction, etc.) in information and communication theory

Cited in **5** Documents

**Keywords:**

texture synthesis; conditional locally Gaussian; patch size; multiscale

**Software:**

Steerable pyramid

**Full Text:** [DOI](#)

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