Gao, Shang-bin; Yan, Yun-yang; Bao, Zheng; Bai, Hua; Zhang, Jia-Wei
Image-adaptive SVD watermarking algorithm based on wavelet perceptual model. (Chinese. English summary) Zbl 1180.94006

Summary: A SVD blind watermarking algorithm is proposed using a wavelet perceptual model, which is adaptive to the host image features. In order to maximize the intensity of watermark embedding, the quantization steps associated with different image features are determined by the significant wavelet coefficients, and a good tradeoff between the transparency and the robustness of the algorithm is achieved. Experiments show that the proposed algorithm is effective and robust to common image processing operations.

MSC:
94A08 Image processing (compression, reconstruction, etc.) in information and communication theory
68P25 Data encryption (aspects in computer science)
94A62 Authentication, digital signatures and secret sharing

Keywords:
digital watermarking; wavelet perceptual model; singular value decomposition (SVD)

Full Text: DOI Link