

عنوان مقاله:

Geometric Modeling of the Wavelet Coefficients for Image Watermarking

محل انتشار:

هشتمین کنفرانس ماشین بینایی و پردازش تصویر ایران (سال: 1392)

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نویسندگان:

Mohammad Hamghalam - *Engineering, Iran University of Science and Technology*

Sattar Mirzakuchaki - *Engineering, Iran University of Science and Technology*

Mohammad Ali Akhaee - *Department of Electrical and Computer Engineering, College of Eng., University of Tehran, Tehran*

خلاصه مقاله:

In this paper, a robust image watermarking method based on geometric modeling is presented. Eight samples of wavelet approximation coefficients on each image block are utilized to construct two line segments in the 2-D space. We change the angle formed between these line segments for data embedding. Geometrical tools are used to solve the tradeoff between the transparency and robustness of the watermark data. Due to embedding in the angle between two line segments, the proposed scheme has high robustness against the gain attacks. In addition, using the low frequency components of the image blocks for data embedding, high robustness against noise and compression attacks has been achieved. Experimental results confirm the validity of the theoretical analyses given in the paper and show the superiority of the proposed method against common attacks, such as Gaussian filtering, median filtering and scaling attacks.

کلمات کلیدی:

image watermarking; geometric modeling; wavelet transform

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