

研究简报

## 基于特征值苑配的变比特率相关矢量量化图像编码算法

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摘要

该文提出了一种用于图像编码的新颖的变比特率相关矢量量化器。在编码之前, 首先计算各码字的四个特征值, 然后根据各特征值的升序排列得到相应的四个排序码书。在对当前输入矢量(当前处理图像块)进行编码的过程中, 充分考虑当前处理图像块与其相邻图像块之间的相关性以及各码字特征值与该输入矢量特征值之间的匹配性。测试结果表明, 该算法与传统矢量量化(VQ)器相比, 虽然在编码质量上有少许下降, 但降低了比特率并加快了编码速度。

关键词 [图像编码](#) [矢量量化](#)

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## AN IMAGE ENCODING ALGORITHM USING VARIABLE-RATE CORRELATION VECTOR QUANTIZER BASED ON THE MATCHING OF CHARACTERISTIC VALUES

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Abstract

A novel variable-rate correlation vector quantizer is presented for image encoding in this paper. Before encoding, four characteristic values of each codeword are computed, then four corresponding sorted codebooks are obtained according to the ascending order of the four characteristic values of codewords respectively. During the encoding, high correlation of the adjacent image blocks and characteristic values of the current processing vector and codewords are considered to encode the current processing vector. Experimental results show that, although the encoding quality of the proposed algorithm is a little worse than that of the conventional VCS, the bit rate of the proposed algorithm is lower than that of the conventional VQ, and the encoding time of the proposed algorithm is much shorter than that of the conventional VCS.

Key words [Image coding](#) [Vector quantization](#)

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