A recursive algorithm for computing the convolution of an image with a two-dimensional inseparable polynomial FIR filter

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Abstract

The article discusses a recursive algorithm for computing the image convolution with a two-dimensional nonseparable polynomial FIR filter. The essential point is the refusal to use the 2-D filter decomposition by a set of separable links. The proposed recursive algorithm is evaluated from the point of view of its computational complexity and is compared to the well-known algorithm using the above decomposition.

Keywords: FIR filter, two-dimensional polynomial, 2-D filter.

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Access full text (in Russian)

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