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Research Letter

Estimation of Subpixel Motion Using Bispectrum

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Abstract

Motion estimation techniques are widely used in today's video processing systems. The frequently used techniques are frequency-domain motion estimation methods, most notably phase correlation (PC). If the image frames are corrupted by Gaussian noises, then cross-correlation and related techniques do not work well. In this paper, however, we have studied this topic from a viewpoint different from the above. Our scheme is based on the bispectrum method for sub-pixel motion estimation of noisy image sequences. Experimental results show that our proposed method performs significantly better than PC technique.

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