Abstract

Image sequences filtering have recently become a very important technical problem especially with the advent of new technology in multimedia and video systems applications. Often image sequences are corrupted by some amount of noise introduced by the image sensor and therefore inherently present in the imaging process. The main problem in the image sequences is how to deal with spatio-temporal and non stationary signals. In this paper, we propose a robust method for noise removal of image sequence based on coupled spatial and temporal anisotropic diffusion. The idea is to achieve an adaptive smoothing in both spatial and temporal directions, by solving a nonlinear diffusion equation. This allows removing noise while preserving all spatial and temporal discontinuities.

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Robust Noise Filtering in Image Sequences

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Index Terms

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