Compression of locally oscillatory signal with discontinuities

A nonlinear multiresolution scheme within Harten's framework corresponding to a nonlinear interpolatory technique is used for the compression of locally oscillatory signals with singularities. It is based on a combination of local techniques with a specific adaptive treatment of discontinuities for the slowly varying part of the signal and global techniques (applied locally), derived from Fourier decompositions, to represent the oscillatory part. Compression properties are shown on various numerical experiments.

Key Words. Multiresolution, nonlinearity, oscillatory, singularities.

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