Non Separable Multiresolution Analysis with Error Control

Multiresolution representations of data are a powerful tool in data compression. For a proper adaptation to the edges, it is crucial to develop nonlinear methods which are not based on tensor product. Thus, one needs to control the stability of these representations. In this paper, two-dimensional multiresolution processing algorithms that ensure this stability are introduced. A prescribed accuracy in various norms is ensured by these strategies. Explicit error bounds are presented.

Key Words. Stability, multiresolution, non separable.

AMS(MOS) subject classifications. 41A05,41A15.