

1096-Q1-245

Patrick J Van Fleet* (pjvanfleet@stthomas.edu), 2115 Summit Avenue OSS 201, Department of Mathematics, University of St. Thomas, St. Paul, MN 55105. *The Morphological Wavelet Transformation*. Preliminary report.

The discrete wavelet transformation (DWT) is a popular tool in image processing. The DWT decomposes an image into an approximation of the original as well as details at a prescribed number of levels. While the transformation provides local information about the low- and high-pass nature of the data, it does not provide other desired information such as a maximum value and its position in a local region.

In this talk, we will describe the morphological wavelet transformation (MWT) due to De and Chanda. This non-linear, invertible variant of the discrete Haar wavelet transformation (HWT) not only decomposes the image into an approximation and details, but also provides information regarding maximum values and their positions. De and Chanda have used the MWT to develop an efficient algorithm for performing image fusion.

We will conclude the talk by detailing a couple of student projects that utilize the MWT. (Received August 22, 2013)