

1056-42-564

John J. Benedetto* (jjb@math.umd.edu), Norbert Wiener Center, Department of Mathematics, College Park, MD 20742. *A frame theoretic construction for spectral imaging data.* Preliminary report.

Motivated by hyperspectral and multispectral imaging problems, we construct a frame-based algorithm for dimension reduction and classification. The algorithm is formulated in terms of frame potential energy and constraint-based optimal frames. Sparse image representation is a key feature of the algorithm. (Received September 12, 2009)