

Weighted Haar and Alpert Wavelets: Degeneracy and Stability

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In this talk we discuss the properties of weighted Haar and Alpert wavelets. We will give a classification of the measures in which such wavelet bases are degenerate, and describe techniques for finding dimensions of the underlying spaces from which the wavelets are drawn. We will also present a stability result for weighted Haar wavelets in doubling measures, and some preliminary work regarding the question of stability in non-doubling measures.