

DISCRETE FRAMES ON FINITE DIMENSIONAL QUATERNION HILBERT SPACES

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Abstract. A general theory of frames on finite dimensional quaternion Hilbert spaces is demonstrated along the lines of their complex counterpart. In this paper we established the frame decomposition theorem for quaternion Hilbert space. At the conclusion a perceptive clarification of why frames are important in signal transmission is given.

Key words: Frames, quaternions, quaternion Hilbert spaces.