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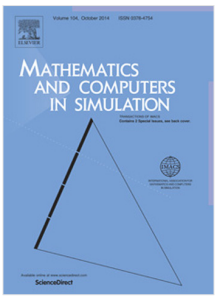

Frame Reconstruction with noise reduction in Hilbert space and Application in communication systems

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Frame Reconstruction with noise reduction in Hilbert space and Application in communication systems☆

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Abstract

In this work, classification for Frame and Fourier coefficient have been discussed. We provided the relation between hidden code coefficients and signal coefficients on $L^2[-T,T]$ and introduced a theorem has been proved for recovering the original signal. We provided Key exchange algorithms to store or transmit the information. After decoding, we recovered the filter signal that is less than or equal to original signal with negligible amount of errors. In the last theorem of this paper, we provided a technique to obtain the error to recover the exact information. The application in communication systems for speech signal with low and high frequencies has been discussed at the end.

Keywords: Frame,Orthonormal basis,Hilbert space , Signal reconstruction
2010 MSC: Primary 46C05, 42C15; Secondary 94A15

1. Introduction

The property of Linear independence allows to basis that every element at the space has formed like linear combinations. It has some real time difficulties to process in engineering and technology. But, frame permit every element in the space formed like a linear combination of vector or signal on the frame and

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[1]Since 1880.