Abstract

Finding orthogonal matrices in different sizes is very complex and important because it can be used in different applications like image processing and communications (e.g., CDMA and OFDM). In this paper we introduce a new method to find orthogonal matrices by using tensor products between two or more orthogonal matrices of real and imaginary numbers with applying it in images and communication signals processing. The output matrices will be orthogonal matrices too and the processing by our new method is very easy compared to other classical methods those use basic proofs. The results are normal and acceptable in communication signals and images but it needs more research works.

References

Mixed Transforms Generated by Tensor Product and Applied in Data Processing

: 56 – 72
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**Index Terms**

Computer Science  
Data Processing

**Keywords**

Orthogonally, OFDM, CDMA, JCDMA, Wavelet, Safe Transform, Compression, Kronecker product