Improving Embedding Capacity by using the Z4-linearity of Preparata Codes

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Abstract

This paper presents a novel steganographic scheme based on nonlinear Preparata codes that can achieve better performance for application in steganography than simple linear codes currently in use. The idea of this paper is to use the Z4-linearity of Preparata non-linear codes for the construction of a new steganographic scheme and to show that quaternary covering functions can provide embedding capacity higher than binary ones and can maintain good image quality as well.

References

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Index Terms

Computer Science

Security
Keywords
Nonlinear codes  Codes over rings  Quaternary codes  Embedding efficiency  Preparata codes