

Title: Measures of pseudorandomness of families of binary lattices, II (A further construction)

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In Part I of this paper we extended the notions of family complexity, collision and avalanche effect from one dimension to n dimensions, i.e., from binary sequences to binary lattices. Then we considered a large family of binary lattices with strong pseudorandom properties which had been constructed by using quadratic characters of finite fields, and we showed that this family also possesses a nice structure in terms of these notions. In Part I we considered a large family of binary sequences with strong pseudorandom properties constructed by using additive characters and we extended it to n dimensions, i.e., to binary lattices. In this paper we will show that these binary lattices possess strong pseudorandom properties, and their family also possesses a nice structure in terms of family complexity, collision and avalanche effect.

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