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New methods of construction of cartesian authentication codes from geometries over finite commutative rings

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Abstract

In this paper, we construct some cartesian authentication codes from geometries over finite commutative rings. We only assume the uniform probability distribution over the set of encoding rules in order to be able to compute the probabilities of successful impersonation attack and substitution attack. Our methods are comfortable and secure for users, i.e., our encoding rules reduce the probabilities of successful impersonation attack and substitution attack.

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