

Lattices and their Applications in Communications

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Abstract

Lattices in the n -dimensional Euclidean space are composed by all integer linear combination of a set of linearly independent vectors. Lattices built from linear codes over finite rings or associated to algebraic number theory constructions have been applied to coding for signal transmission over Gaussian and fading channels and also in cryptography. This presentation will include a general introduction to this topic and some recent results.

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