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# Study of the possibility of complex code sequences decoding

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*Pseudonoise signals are widely used for transferring useful information and ensuring synchronization. Development of a decoding method of a wide class of the pseudonoise signals formed by a combination of several initial component of  $M$ -sequences by this or that rule are of interest. The conducted research is based on the basic principles of the theory of Galois fields and of structural properties of pseudonoise signals. It is shown that decomposition of the combined code sequences on components is possible by solving the system of equations which interconnect coordinates of the Galois fields' elements and input characters of the decoded code sequence.*

**Keywords:** *pseudonoise signals, Galois field, an accompanying matrix of a polynomial, vectors columns of coordinate.*

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