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Algebra and codes

Dr. Claudiu VOLF,
Faculty of Mathematics
Alexandru Ioan Cuza University

Mathematics is not merely an idle art form, it is an essential part of our society.

Richard Hamming

Abstract

The modern society would collapse without reliable methods of securing information integrity and confidentiality. Guarding against errors which inevitably occur in the process of *data transmission* and *data storage* is the object of the theory of *error-correcting codes*. Some very important and useful error-correcting codes are devised using algebraic concepts: *finite fields*, *polynomials*, *linear systems*. These algebraic tools are also used in *cryptography* (the science of ensuring information confidentiality).



Algebra and codes (Claudiu Volf, Faculty of Mathematics, "Al.- I. Cuza" University, Iași)

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