Error-Correcting Codes – A Beautiful Chapter of Applicable Algebra and Geometry

Talk

Marcus Greferath University College Dublin marcus.greferath@ucd.ie

(joint work with)

It was observed early in the development of error-control coding that structures from geometry and combinatorics can yield powerful examples of errorcorrecting codes. This talk's intention is to advance this amazingly beautiful field in applicable algebra and geometry. We will report on a collection of results from our own previous and current research.

MSC2010: 94, 51, 16, 05.

Keywords: Error-Correcting Codes, Ring-Linearity, Low-Density Parity-Check Codes, Graphs, Ring-Geometry.

Section: 14.